

# SEARCH REQUEST FORM

Scientific and Technical Information Center

Access DB#

179558

Requester's Full Name: SABITA GAZI Examiner #: 74141 Date: 2/14/06  
 Art Unit: 1616 Phone Number: 30622 Serial Number: 10/25-73423  
 Mail Box and Bldg/Room Location: 4445 Results Format Preferred (check) PAPER DISK E-MAIL  
4670

If more than one search is submitted, please prioritize searches in order of need.  
 Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or entity of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc. if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Process for irrigation of soil with water and fertilizers which provide  
 Inventors (please provide full names): SIMON ALEXANDER HANSON ROSE et al

Earliest Priority Filing Date: 7/31/1998 Div. of 09/361,816

\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.  
Cl 1, 6-8, 10, 11 + 17

Please search for a composition as in cl 1.  
 Specific ingredient (b) in cl 6 is a copolymer of acrylamide with vinyl.

enclose is copy of claims

Thank you.

STAFF USE ONLY		Type of Search	Vendor and cost where applicable
Searcher: <u>Alexandra Wadsworth</u>	Point of Contact: <u>Technical Info. Specialist</u>	NA Sequence (#) <u>335</u>	SIN <u>20</u>
Searcher Phone #: <u>30622</u>	Technical Info. Specialist: <u>30622</u>	AA Sequence (#)	Dialog <u>866</u>
Searcher Location: <u>4445</u>	Structure (#)	Quest/Orbit	
Date Searcher Picked Up: <u>2-13-06</u>	Bibliography	Th. Link	
Date Completed: <u>3-13-06</u>	Litigation	Lexis/Nexis	
Searcher Prep & Review Time: <u>18</u>	Fulltext	Sequence Systems	
*Retreat Prep Time:	Patent Family	WWW/Inetnet	
Online Fee: <u>4.8</u>	Other	Other (specify)	

=&gt; d his ful

FILE 'REGISTRY' ENTERED AT 09:33:18 ON 13 MAR 2006

L1	1	SEA ABB=ON	PLU=ON	25085-02-3
L2	1	SEA ABB=ON	PLU=ON	7446-81-3
L3	1	SEA ABB=ON	PLU=ON	79-10-7
L4	1	SEA ABB=ON	PLU=ON	79-06-1
L5	10	SEA ABB=ON	PLU=ON	25085-02-3/CRN
L6	2618	SEA ABB=ON	PLU=ON	7446-81-3/CRN
L7	58795	SEA ABB=ON	PLU=ON	79-10-7/CRN
L8	14023	SEA ABB=ON	PLU=ON	79-06-1/CRN
L9	379	SEA ABB=ON	PLU=ON	L6 AND L8
L10	4	SEA ABB=ON	PLU=ON	L9 AND NC<4
L11	3354	SEA ABB=ON	PLU=ON	L8 AND L7
L12	362	SEA ABB=ON	PLU=ON	L11 AND NC<4
L13	37	SEA ABB=ON	PLU=ON	L12 AND SALT

FILE 'CAPLUS' ENTERED AT 09:35:27 ON 13 MAR 2006

L14	1346	SEA ABB=ON	PLU=ON	L10
L15	1676	SEA ABB=ON	PLU=ON	L13
L16	1676	SEA ABB=ON	PLU=ON	L14 OR L15
L17	3	SEA ABB=ON	PLU=ON	L2 (L) L4
L18	120	SEA ABB=ON	PLU=ON	L3 (L) L4
L19	123	SEA ABB=ON	PLU=ON	L17 OR L18
L20	1797	SEA ABB=ON	PLU=ON	L16 OR L19
L21	128074	SEA ABB=ON	PLU=ON	FERTILIZ?/OBI
L22	300320	SEA ABB=ON	PLU=ON	SOIL?/OBI
L23	433551	SEA ABB=ON	PLU=ON	STABIL?/OBI
L24	13	SEA ABB=ON	PLU=ON	L20 AND L21
L25	197033	SEA ABB=ON	PLU=ON	ACRYLATE#/OBI OR ACRYLIC ACID/OBI
L26	35249	SEA ABB=ON	PLU=ON	ACRYLAMIDE#/OBI
L27	8414	SEA ABB=ON	PLU=ON	L25 (L) L26
L28	31	SEA ABB=ON	PLU=ON	L27 AND L21
L29	804	SEA ABB=ON	PLU=ON	L27 (L) SALT?/OBI
L30	3	SEA ABB=ON	PLU=ON	L29 AND L21
L31	38	SEA ABB=ON	PLU=ON	L29 AND (L22 )
L32	9	SEA ABB=ON	PLU=ON	L31 AND L23
L33	24	SEA ABB=ON	PLU=ON	L30 OR L32 OR L24
				D SCAN TI
				E ROSE S/AU
L34	86	SEA ABB=ON	PLU=ON	("ROSE S"/AU OR "ROSE S A"/AU)
				E ROSE SIMON/AU
L35	5	SEA ABB=ON	PLU=ON	"ROSE SIMON ALEXANDER HANSON"/AU
				E TURNER J/AU
L36	183	SEA ABB=ON	PLU=ON	TURNER J/AU
L37	87	SEA ABB=ON	PLU=ON	TURNER J A?/AU
				E TURNER JAYNE/AU
L38	1	SEA ABB=ON	PLU=ON	"TURNER JAYNE ANNE"/AU
L39	361	SEA ABB=ON	PLU=ON	(L34 OR L35 OR L36 OR L37 OR L38)
L40	4	SEA ABB=ON	PLU=ON	L39 AND (L20 OR L27)
L41	4	SEA ABB=ON	PLU=ON	L39 AND L21
L42	2	SEA ABB=ON	PLU=ON	L39 AND L22 AND L23
L43	6	SEA ABB=ON	PLU=ON	(L40 OR L41 OR L42)
L44	4	SEA ABB=ON	PLU=ON	L43 NOT L33
L45	18	SEA ABB=ON	PLU=ON	L39 AND 19/SX,SC
L46	9	SEA ABB=ON	PLU=ON	L45 AND (5/SC,SC OR SOIL/AB OR FERTILIZ?/AB
				OR AGROCHEM?/AB)
L47	10	SEA ABB=ON	PLU=ON	L46 OR L43
L48	8	SEA ABB=ON	PLU=ON	L47 NOT L33
				D SCAN TI

FILE 'WPIX' ENTERED AT 09:52:51 ON 13 MAR 2006

E ROSE S/AU  
L49 76 SEA ABB=ON PLU=ON ("ROSE S"/AU OR "ROSE S A"/AU OR "ROSE S A  
H"/AU)  
E TURNER J/AU  
L50 197 SEA ABB=ON PLU=ON ("TURNER J"/AU OR "TURNER J A"/AU)  
L51 272 SEA ABB=ON PLU=ON L49 OR L50  
L52 92772 SEA ABB=ON PLU=ON SOIL  
L53 18708 SEA ABB=ON PLU=ON FERTILIZ?  
L54 12233 SEA ABB=ON PLU=ON AGROCHEM?  
L55 22416 SEA ABB=ON PLU=ON ACRYLAMIDE# OR ACRYL AMIDE#  
L56 117004 SEA ABB=ON PLU=ON ACRYLATE OR ACRYLIC ACID#  
L57 3 SEA ABB=ON PLU=ON L51 AND (L55 AND L56)  
L58 2 SEA ABB=ON PLU=ON L51 AND L53  
L59 4 SEA ABB=ON PLU=ON L51 AND L52  
L60 6 SEA ABB=ON PLU=ON (L57 OR L58 OR L59)  
L61 12029 SEA ABB=ON PLU=ON L55 (L) L56  
L62 22 SEA ABB=ON PLU=ON L61 (L) L53 (L) (L53 OR L54)  
L63 13 SEA ABB=ON PLU=ON L62 AND C04/DC  
L64 5 SEA ABB=ON PLU=ON L60, NOT L63

FILE 'CAPLUS, WPIX' ENTERED AT 09:59:35 ON 13 MAR 2006

L65 36 DUP REM L33 L63 (1 DUPLICATE REMOVED)  
ANSWERS '1-24' FROM FILE CAPLUS  
ANSWERS '25-36' FROM FILE WPIX  
L66 12 DUP REM L48 L64 (1 DUPLICATE REMOVED)  
ANSWERS '1-8' FROM FILE CAPLUS  
ANSWERS '9-12' FROM FILE WPIX

=> fil reg  
FILE 'REGISTRY' ENTERED AT 10:00:10 ON 13 MAR 2006  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
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Property values tagged with IC are from the ZIC/VINITI data file  
provided by InfoChem.

STRUCTURE FILE UPDATES: 12 MAR 2006 HIGHEST RN 876514-29-3  
DICTIONARY FILE UPDATES: 12 MAR 2006 HIGHEST RN 876514-29-3

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH January 6, 2006

Please note that search-term pricing does apply when  
conducting SmartSELECT searches.

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\*  
\* The CA roles and document type information have been removed from \*  
\* the IDE default display format and the ED field has been added, \*  
\* effective March 20, 2005. A new display format, IDERL, is now \*  
\* available and contains the CA role and document type information. \*  
\*  
\*\*\*\*\*

Structure search iteration limits have been increased. See HELP SLIMITS  
for details.

REGISTRY includes numerically searchable data for experimental and  
predicted properties as well as tags indicating availability of  
experimental property data in the original document. For information  
on property searching in REGISTRY, refer to:

<http://www.cas.org/ONLINE/UG/regprops.html>

=> d que 11;d rn cn 11  
L1 1 SEA FILE=REGISTRY ABB=ON PLU=ON 25085-02-3

L1 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2006 ACS on STN  
RN 25085-02-3 REGISTRY  
CN 2-Propenoic acid, sodium salt, polymer with 2-propenamide (9CI) (CA INDEX  
NAME)  
OTHER CA INDEX NAMES:  
CN 2-Propenamide, polymer with sodium 2-propenoate (9CI)  
CN Acrylamide, polymer with sodium acrylate (8CI)  
CN Acrylic acid, sodium salt, polymer with acrylamide (8CI)  
OTHER NAMES:  
CN 905MPM  
CN 956MPM  
CN 977VHM  
CN A 140  
CN A 140 (flocculant)  
CN A 3116

CN Accofloc A 125  
 CN Accostrength 86  
 CN Acrylamide-sodium acrylate copolymer  
 CN Acrylamide-sodium acrylate polymer  
 CN AD 17  
 CN AD 27  
 CN AD 37  
 CN AD 60  
 CN Akrygel  
 CN AL 30  
 CN Alcomer 120  
 CN Alcosorb AB 3C  
 CN AP 1  
 CN AP 1 (coagulant)  
 CN Aronfloc A 101  
 CN Clarifloc 820  
 CN Crosfloc CFA 20  
 CN Crosfloc CFA 80  
 CN Cyanamer 21  
 CN Cyanamer A 370  
 CN EarthGuard  
 CN EM 533  
 CN EMA 10  
 CN Espex L  
 CN Floconit  
 CN FloGel 509  
 CN FN 20H  
 CN Glascol WN 33  
 CN GPC-A 400  
 CN Hostacerin PN 73  
 CN Ikstab  
 CN Kayafloc A 275  
 CN Kurifloc PA 372  
 CN Magnafloc 156  
 CN Magnafloc LT 30  
 CN Magnifloc 1883A  
 CN Magnifloc 834A  
 CN Nalco 8873  
 CN OA 8  
 CN Orfloc AP 1  
 CN Orfloc AX 500S

ADDITIONAL NAMES NOT AVAILABLE IN THIS FORMAT - Use FCN, FIDE, or ALL for  
 DISPLAY

=> d que 12;d rn cn 12

L2 1 SEA FILE=REGISTRY ABB=ON PLU=ON 7446-81-3

L2 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2006 ACS on STN  
 RN 7446-81-3 REGISTRY  
 CN 2-Propenoic acid, sodium salt (9CI) (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN Acrylic acid, sodium salt (6CI, 7CI, 8CI)  
 OTHER NAMES:  
 CN Sodium 2-propenoate  
 CN Sodium acrylate  
 CN Webac 240A1

=> d que 13;d rn cn 13

L3 1 SEA FILE=REGISTRY ABB=ON PLU=ON 79-10-7

L3 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2006 ACS on STN

RN 79-10-7 REGISTRY

CN 2-Propenoic acid (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Acrylic acid (6CI, 7CI, 8CI)

OTHER NAMES:

CN Acroleic acid

CN Ethylenecarboxylic acid

CN NSC 4765

CN Propenoic acid

CN Vinylformic acid

=> d que 14; d rn cn 14

L4 1 SEA FILE=REGISTRY ABB=ON PLU=ON 79-06-1

L4 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2006 ACS on STN

RN 79-06-1 REGISTRY

CN 2-Propenamide (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Acrylamide (8CI)

OTHER NAMES:

CN Acrylic amide

CN Bio-Acrylamide 50

CN Ethylenecarboxamide

CN NSC 7785

CN Propenamide

CN Vinyl amide

=> d his 15-113

(FILE 'REGISTRY' ENTERED AT 09:33:18 ON 13 MAR 2006)

L5 10 S 25085-02-3/CRN

L6 2618 S 7446-81-3/CRN

L7 58795 S 79-10-7/CRN

L8 14023 S 79-06-1/CRN

L9 379 S L6 AND L8

L10 4 S L9 AND NC<4

L11 3354 S L8 AND L7

L12 362 S L11 AND NC<4

L13 37 S L12 AND SALT

=> fil caplus wpix

FILE 'CAPLUS' ENTERED AT 10:01:40 ON 13 MAR 2006

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FILE 'WPIX' ENTERED AT 10:01:40 ON 13 MAR 2006

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=> d que 165

L2	1	SEA	FILE=REGISTRY	ABB=ON	PLU=ON	7446-81-3
L3	1	SEA	FILE=REGISTRY	ABB=ON	PLU=ON	79-10-7
L4	1	SEA	FILE=REGISTRY	ABB=ON	PLU=ON	79-06-1
L6	2618	SEA	FILE=REGISTRY	ABB=ON	PLU=ON	7446-81-3/CRN
L7	58795	SEA	FILE=REGISTRY	ABB=ON	PLU=ON	79-10-7/CRN
L8	14023	SEA	FILE=REGISTRY	ABB=ON	PLU=ON	79-06-1/CRN
L9	379	SEA	FILE=REGISTRY	ABB=ON	PLU=ON	L6 AND L8
L10	4	SEA	FILE=REGISTRY	ABB=ON	PLU=ON	L9 AND NC<4
L11	3354	SEA	FILE=REGISTRY	ABB=ON	PLU=ON	L8 AND L7
L12	362	SEA	FILE=REGISTRY	ABB=ON	PLU=ON	L11 AND NC<4
L13	37	SEA	FILE=REGISTRY	ABB=ON	PLU=ON	L12 AND SALT
L14	1346	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	L10
L15	1676	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	L13
L16	1676	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	L14 OR L15
L17	3	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	L2 (L) L4
L18	120	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	L3 (L) L4
L19	123	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	L17 OR L18
L20	1797	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	L16 OR L19
L21	128074	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	FERTILIZ?/OBI
L22	300320	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	SOIL?/OBI
L23	433551	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	STABIL?/OBI
L24	13	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	L20 AND L21
L25	197033	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	ACRYLATE#/OBI OR ACRYLIC ACID/OBI
L26	35249	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	ACRYLAMIDE#/OBI
L27	8414	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	L25 (L) L26
L29	804	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	L27 (L) SALT?/OBI
L30	3	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	L29 AND L21
L31	38	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	L29 AND (L22 )
L32	9	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	L31 AND L23
L33	24	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	L30 OR L32 OR L24
L53	18708	SEA	FILE=WPIX	ABB=ON	PLU=ON	FERTILIZ?
L54	12233	SEA	FILE=WPIX	ABB=ON	PLU=ON	AGROCHEM?
L55	22416	SEA	FILE=WPIX	ABB=ON	PLU=ON	ACRYLAMIDE# OR ACRYL AMIDE#
L56	117004	SEA	FILE=WPIX	ABB=ON	PLU=ON	ACRYLATE OR ACRYLIC ACID#
L61	12029	SEA	FILE=WPIX	ABB=ON	PLU=ON	L55 (L) L56
L62	22	SEA	FILE=WPIX	ABB=ON	PLU=ON	L61 (L) L53 (L) (L53 OR L54)
L63	13	SEA	FILE=WPIX	ABB=ON	PLU=ON	L62 AND C04/DC
L65	36	DUP	REM	L33 L63	(1 DUPLICATE REMOVED)	

=> d que 166

L2	1	SEA	FILE=REGISTRY	ABB=ON	PLU=ON	7446-81-3
L3	1	SEA	FILE=REGISTRY	ABB=ON	PLU=ON	79-10-7
L4	1	SEA	FILE=REGISTRY	ABB=ON	PLU=ON	79-06-1
L6	2618	SEA	FILE=REGISTRY	ABB=ON	PLU=ON	7446-81-3/CRN
L7	58795	SEA	FILE=REGISTRY	ABB=ON	PLU=ON	79-10-7/CRN
L8	14023	SEA	FILE=REGISTRY	ABB=ON	PLU=ON	79-06-1/CRN
L9	379	SEA	FILE=REGISTRY	ABB=ON	PLU=ON	L6 AND L8

L10	4	SEA	FILE=REGISTRY	ABB=ON	PLU=ON	L9 AND NC<4
L11	3354	SEA	FILE=REGISTRY	ABB=ON	PLU=ON	L8 AND L7
L12	362	SEA	FILE=REGISTRY	ABB=ON	PLU=ON	L11 AND NC<4
L13	37	SEA	FILE=REGISTRY	ABB=ON	PLU=ON	L12 AND SALT
L14	1346	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	L10
L15	1676	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	L13
L16	1676	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	L14 OR L15
L17	3	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	L2 (L) L4
L18	120	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	L3 (L) L4
L19	123	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	L17 OR L18
L20	1797	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	L16 OR L19
L21	128074	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	FERTILIZ?/OBI
L22	300320	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	SOIL?/OBI
L23	433551	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	STABIL?/OBI
L24	13	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	L20 AND L21
L25	197033	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	ACRYLATE#/OBI OR ACRYLIC ACID/OBI
L26	35249	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	ACRYLAMIDE#/OBI
L27	8414	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	L25 (L) L26
L29	804	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	L27 (L) SALT?/OBI
L30	3	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	L29 AND L21
L31	38	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	L29 AND (L22 )
L32	9	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	L31 AND L23
L33	24	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	L30 OR L32 OR L24
L34	86	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	("ROSE S"/AU OR "ROSE S A"/AU)
L35	5	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	"ROSE SIMON ALEXANDER HANSON"/A U
L36	183	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	TURNER J/AU
L37	87	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	TURNER J A?/AU
L38	1	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	"TURNER JAYNE ANNE"/AU
L39	361	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	(L34 OR L35 OR L36 OR L37 OR L38)
L40	4	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	L39 AND (L20 OR L27)
L41	4	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	L39 AND L21
L42	2	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	L39 AND L22 AND L23
L43	6	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	(L40 OR L41 OR L42)
L45	18	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	L39 AND 19/SX,SC
L46	9	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	L45 AND (5/SC,SC OR SOIL/AB OR FERTILIZ?/AB OR AGROCHEM?/AB)
L47	10	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	L46 OR L43
L48	8	SEA	FILE=CAPLUS	ABB=ON	PLU=ON	L47 NOT L33
L49	76	SEA	FILE=WPIX	ABB=ON	PLU=ON	("ROSE S"/AU OR "ROSE S A"/AU OR "ROSE S A H"/AU)
L50	197	SEA	FILE=WPIX	ABB=ON	PLU=ON	("TURNER J"/AU OR "TURNER J A"/AU)
L51	272	SEA	FILE=WPIX	ABB=ON	PLU=ON	L49 OR L50
L52	92772	SEA	FILE=WPIX	ABB=ON	PLU=ON	SOIL
L53	18708	SEA	FILE=WPIX	ABB=ON	PLU=ON	FERTILIZ?
L54	12233	SEA	FILE=WPIX	ABB=ON	PLU=ON	AGROCHEM?
L55	22416	SEA	FILE=WPIX	ABB=ON	PLU=ON	ACRYLAMIDE# OR ACRYL AMIDE#
L56	117004	SEA	FILE=WPIX	ABB=ON	PLU=ON	ACRYLATE OR ACRYLIC ACID#
L57	3	SEA	FILE=WPIX	ABB=ON	PLU=ON	L51 AND (L55 AND L56)
L58	2	SEA	FILE=WPIX	ABB=ON	PLU=ON	L51 AND L53
L59	4	SEA	FILE=WPIX	ABB=ON	PLU=ON	L51 AND L52
L60	6	SEA	FILE=WPIX	ABB=ON	PLU=ON	(L57 OR L58 OR L59)
L61	12029	SEA	FILE=WPIX	ABB=ON	PLU=ON	L55 (L) L56
L62	22	SEA	FILE=WPIX	ABB=ON	PLU=ON	L61 (L) L53 (L) (L53 OR L54)
L63	13	SEA	FILE=WPIX	ABB=ON	PLU=ON	L62 AND C04/DC
L64	5	SEA	FILE=WPIX	ABB=ON	PLU=ON	L60 NOT L63

*Inventor*  
*Seoerch*



L66

12 DUP REM L48 L64 (1 DUPLICATE REMOVED)

=> d .ca l65 1-24;d .wp l65 25-36;d ibib ab l66 1-12  
 THE ESTIMATED COST FOR THIS REQUEST IS 73.68 U.S. DOLLARS  
 DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:y

L65 ANSWER 1 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 1  
 ACCESSION NUMBER: 2000:117127 CAPLUS  
 DOCUMENT NUMBER: 132:155688  
 TITLE: Soil treatment compositions and their use  
 INVENTOR(S): Rose, Simon Alexander Hanson; Turner, Jayne Anne  
 PATENT ASSIGNEE(S): Ciba Specialty Chemicals Water Treatments Limited, UK  
 SOURCE: PCT Int. Appl., 24 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000008114	A1	20000217	WO 1999-EP5126	19990719
W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
AU 9956183	A1	20000228	AU 1999-56183	19990719
AU 744421	B2	20020221		
EP 1105443	A1	20010613	EP 1999-942789	19990719
EP 1105443	B1	20031112		
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO			
AT 254159	E	20031115	AT 1999-942789	19990719
PT 1105443	T	20040331	PT 1999-942789	19990719
ES 2211152	T3	20040701	ES 1999-942789	19990719
US 2001018047	A1	20010830	US 2001-838430	20010419
US 2002136749	A1	20020926	US 2002-57423	20020124
PRIORITY APPLN. INFO.:			GB 1998-16784	A 19980731
			WO 1999-EP5126	W 19990719
			US 1999-361816	A3 19990727

ED Entered STN: 18 Feb 2000

AB The invention provides aqueous soil treatment compns. comprising water and dissolved ionic water-soluble fertilizer in an amount of  $\geq 10$  weight% and dissolved water-soluble anionic polymer having  $\geq 6$  dL/g and ionic content  $\geq 40$  weight%. Such concs. can have low viscosity and be pourable and be used as concs. for dilution in irrigation processes.

IC ICM C09K017-18

ICS C09K017-22; C05G003-00; C05G003-04; C05C009-00

CC 58-5 (Cement, Concrete, and Related Building Materials)

Section cross-reference(s): 19

ST. soil stabilization fertilization treatment compn

IT Fertilizers

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(soil treatment compns. and their use)

IT 57-13-6, Urea, uses 6484-52-2, Ammonium nitrate, uses 7783-20-2, Ammonium sulfate, uses 12136-45-7, Potash, uses 15245-12-2, Calcium ammonium nitrate 25085-02-3, Acrylamide-sodium acrylate copolymer 40623-73-2, Acrylamide-AMPS copolymer 144503-03-7  
 RL: BUU (Biological use, unclassified); MOA (Modifier or additive use); BIOL (Biological study); USES (Uses)

(soil treatment compns. and their use)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L65 ANSWER 2 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:1260389 CAPLUS

DOCUMENT NUMBER: 144:22303

TITLE: Preparation, Swelling Behaviors, and Slow-Release Properties of a Poly(acrylic acid-co-acrylamide)/Sodium Humate Superabsorbent Composite

AUTHOR(S): Zhang, Junping; Liu, Ruifeng; Li, An; Wang, Aiqin

CORPORATE SOURCE: Center of Ecological and Green Chemistry, Lanzhou

Institute of Chemical Physics, Chinese Academy of

Sciences, Lanzhou, 730000, Peop. Rep. China

SOURCE: Industrial & Engineering Chemistry Research (2006), 45(1), 48-53

CODEN: IECRED; ISSN: 0888-5885

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 02 Dec 2005

AB A novel functional superabsorbent composite with slow-release fertilizer properties from acrylic acid (AA), acrylamide (AM), and sodium humate (SH), PAA-AM/SH, was prepared by aqueous solution polymerization, using N,N'-methylenebisacrylamide (MBA) as a cross-linker and ammonium persulfate (APS) as an initiator. The effects of the SH content on water absorbency and swelling rate were studied. In addition, the water absorbency in various saline solns. and the reswelling capacity of the superabsorbent composite were also systematically investigated. The water absorbency, salt resistance, and reswelling capacity of the superabsorbent composite are improved by introducing SH into the PAA-AM polymeric network. The functionality of the superabsorbent composite in practice was investigated exptl. by studying the release of SH and by testing the water-retention capability of the composite in sand soil. The superabsorbent composite shows slow-release fertilizer behavior after SH is introduced. Compared to sand soil without the superabsorbent composite, 33.45 wt % water was still retained on the 20th day when the sand soil was mixed with 1.0 wt % composite. Thus, the efficiency of SH utilization and water-retention capability of the superabsorbent composite are greatly enhanced at the same time by introducing SH into the PAA-AM polymeric network.

CC 19-6 (Fertilizers, Soils, and Plant Nutrition)

Section cross-reference(s): 35

ST acrylate copolymer sodium humate superabsorbent composite slow release fertilizer

IT Fertilizers

RL: BSU (Biological study, unclassified); BIOL (Biological study) (slow-release; preparation, swelling behaviors, and slow-release properties of acrylic acid-acrylamide copolymer /sodium humate superabsorbent composite)

IT Humic acids

RL: BSU (Biological study, unclassified); BIOL (Biological study) (sodium salts; preparation, swelling behaviors, and slow-release properties of acrylic acid-acrylamide

copolymer /sodium humate superabsorbent composite)  
 REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L65 ANSWER 3 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2005:75437 CAPLUS  
 DOCUMENT NUMBER: 142:133881  
 TITLE: Slow-acting **fertilizer** compositions  
 containing water-absorbing polymers  
 INVENTOR(S): Kasuya, Kazuhiro; Fujiura, Yoji; Kuriyama, Satoru  
 PATENT ASSIGNEE(S): Sanyo Chemical Industries, Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 20 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005022912	A2	20050127	JP 2003-189495	20030701
PRIORITY APPLN. INFO.:			JP 2003-189495	20030701
ED Entered STN: 28 Jan 2005				
AB Title compns. contain fertilizers absorbed in aqueous gels of polymers which absorb 0-100 mg Ca/(g as dry polymers) and 10-1000 times water at 25°. Thus, acrylic acid-pentaerythritol triallyl ether copolymer Na salt 20, water 120, and Hyponex 50 parts were mixed to give sustained-release fertilizer gel.				
IC ICM C05G003-00				
CC 19-6 (Fertilizers, Soils, and Plant Nutrition) Section cross-reference(s): 38				
ST sustained release <b>fertilizer</b> water absorbent; acrylic acid pentaerythritol triallyl ether copolymer <b>fertilizer</b>				
IT Absorbents <b>Fertilizer</b> experiment (sustained-release <b>fertilizer</b> compns. containing water-absorbing acrylic polymers)				
IT <b>Fertilizers</b> RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses) (sustained-release <b>fertilizer</b> compns. containing water-absorbing acrylic polymers)				
IT 205394-93-0, Sanfresh ST 500D RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses) (sustained-release <b>fertilizer</b> compns. containing water-absorbing acrylic polymers)				
IT 7439-89-6D, Iron, chelate compds. 7487-88-9, Magnesium sulfate, biological studies 7722-76-1, Primary ammonium phosphate 7757-79-1, Potassium nitrate, biological studies 8064-53-7, Hyponex 10043-35-3, Boric acid, biological studies 15491-86-8, Picromerite RL: AGR (Agricultural use); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses) (sustained-release <b>fertilizer</b> compns. containing water-absorbing acrylic polymers)				
IT 25987-30-8P, Acrylamide-acrylic acid copolymer sodium salt 124712-23-8P, Acrylic acid-pentaerythritol triallyl ether copolymer sodium salt 827025-58-1P, Acrylamide-acrylic acid-pentaerythritol triallyl ether copolymer sodium salt RL: AGR (Agricultural use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)				

(sustained-release **fertilizer** compns. containing water-absorbing acrylic polymers)

L65 ANSWER 4 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:211010 CAPLUS

DOCUMENT NUMBER: 141:365689

TITLE: Applied ecotechnical research on Lubao slow-release water-**fertilizer**-nutrition agent

AUTHOR(S): Huang, Daming; Zhang, Wenkui; Shen, Ziwei; Xi, Baoshu

CORPORATE SOURCE: Department of Biological Sciences and Biotechnology, Tsinghua University, Beijing, 100084, Peop. Rep. China

SOURCE: Tsinghua Science and Technology (2004); 9(1), 108-115  
CODEN: TSTEF7; ISSN: 1007-0214

PUBLISHER: Tsinghua University Press

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 17 Mar 2004

AB Lubao slow-release water-fertilizer-nutrition agent (LSWA) is a new and proven highly effective soil additive. This nutrient absorbent polymer dramatically conserves water and reduces fertilizer usage while significantly increasing plant and crop yield. There are numerous benefits that LSWA is engineered to produce; moreover, with every new application new benefits are discovered. LSWA crystals in the soil absorb hundreds of times their mass in water and then, upon demand, release the stored moisture regardless of the soil condition. Unlike previously used polymers, LSWA has great absorbability even under soil pressure, and maintains its absorbability in the presence of fertilizers and other water-soluble additives. It is completely nontoxic, and has a lengthy effective period of seven to ten years. LSWA is extremely cost effective due to its low initial cost, the dramatic reduction in the number of watering cycles, the decrease of fertilizer usage and the increase in crop yield, as well as allowing utilization of previously unusable land. When LSWA crystals are added into the soil, irrigation schedule times can be reduced by more than 50%, and fertilizer usage reduced by up to 33%. In this paper, some basic research on the properties of the soil additive are reported. Some applications are described by reference to a number of case studies. Finally, specific recommendations are given for the application rates and methods for a range of crops and soil conditions.

CC 19-5 (Fertilizers, Soils, and Plant Nutrition)

Section cross-reference(s): 4, 38

ST Lubao water absorbent slow release **fertilizer**; acrylic acid acrylamide copolymer soil amendment

IT **Fertilizers**

RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)  
(slow-release; crosslinked copolymer of partially neutralized acrylic acid and acrylamide for)

IT 59326-44-2

RL: ADV (Adverse effect, including toxicity); AGR (Agricultural use); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)  
(field studies, toxicol. evaluation, and applications of absorbent copolymer as soil amendment)

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L65 ANSWER 5 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:368433 CAPLUS

DOCUMENT NUMBER: 136:369160

TITLE: Soil improving and **fertilizing** composition

INVENTOR(S): Van der Merwe, Pieter Gideo

PATENT ASSIGNEE(S): Aquasoil Limited, Virgin I. (Brit.)

SOURCE: PCT Int. Appl., 21 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002038522	A2	20020516	WO 2001-ZA145	20010914
WO 2002038522	A3	20030220		
WO 2002038522	B1	20030918		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
AU 2002013521	A5	20020521	AU 2002-13521	20010914
BR 2001015269	A	20030812	BR 2001-15269	20010914
ZA 2001008284	A	20011114	ZA 2001-8284	20011009
CN 1353163	A	20020612	CN 2001-137837	20011108
US 2003205072	A1	20031106	US 2003-434902	20030509
PRIORITY APPLN. INFO.:			ZA 2000-6460	A 20001109
			WO 2001-ZA145	W 20010914

ED Entered STN: 18 May 2002

AB The invention provides a process for preparing a soil improving and fertilizing composition from fertilizer and crosslinked copolymer, the process including imparting an elec. charge to at least one of said copolymer and the fertilizer and bringing said copolymer and fertilizer into intimate contact with each other. The fertilizer and crosslinked copolymer are believed to be mech. fused to form the composition. The invention extends to a composition and to an agricultural or horticultural method using the

composition

IC ICM C05F015-00

ICS C05G003-04

CC 19-6 (Fertilizers, Soils, and Plant Nutrition)

ST soil amendment **fertilizer** compn

IT Electric charge

(in manufacture of soil amendment and **fertilizer** composition)

IT Soil amendments

(soil amendment and **fertilizer** composition)

IT **Fertilizers**

RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)

(soil amendment and **fertilizer** composition)

IT 31212-13-2, Potassium acrylate-acrylamide copolymer

RL: MOA (Modifier or additive use); USES (Uses)

(crosslinked; soil amendment and **fertilizer** composition containing)

IT 57-13-6, Urea, biological studies 7487-88-9, Magnesium sulfate, biological studies 7631-95-0, Sodium molybdate 7722-76-1, Monoammonium phosphate 7757-79-1, Potassium nitrate, biological studies 7778-80-5, Potassium sulfate, biological studies 10043-35-3, Boric acid, biological studies 12519-36-7, Zinc EDTA 15275-07-7, Iron EDTA 51395-10-9, Copper EDTA 55448-20-9, Manganese EDTA

RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)

(soil amendment and **fertilizer** composition containing)

IT 158254-60-5, Stockosorb  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (soil amendment and **fertilizer** composition containing)

L65 ANSWER 6 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:157850 CAPLUS  
 DOCUMENT NUMBER: 136:184310  
 TITLE: Water-soluble homopolymers and copolymers having an improved environmental acceptability  
 INVENTOR(S): Mertens, Richard; Herth, Gregor  
 PATENT ASSIGNEE(S): Stockhausen G.m.b.H. & Co. K.-G., Germany  
 SOURCE: PCT Int. Appl., 28 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002016445	A1	20020228	WO 2001-EP6236	20010601
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
DE 10041392	A1	20020307	DE 2000-10041392	20000823
AU 2001072445	A5	20020304	AU 2001-72445	20010601
CA 2417641	AA	20030127	CA 2001-2417641	20010601
EP 1313774	A1	20030528	EP 2001-951544	20010601
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR			
BR 2001013340	A	20030715	BR 2001-13340	20010601
US 2003181620	A1	20030925	US 2003-344694	20030224
US 6740720	B2	20040525		
PRIORITY APPLN. INFO.:			DE 2000-10041392	A 20000823
			WO 2001-EP6236	W 20010601

ED Entered STN: 01 Mar 2002

AB The invention relates to water-soluble homopolymers and copolymers having an EbC50 value according to the algae toxicity test of Scenedesmus subspicatus of greater than 10 mg/L and are manufactured by treatment of the polymers prepared from  $\geq 1$  of (meth)acrylate derivative or (meth)acrylic acid with an ammonium salt and a water-soluble amine and then heat treated. The invention also relates to the use of these polymers as flocculation aids or thickeners and as a constituent of a plant protective agent or of an erosion protective agent.

IC ICM C08F006-00

CC 35-8 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 5, 58

IT Drilling fluids

Flocculants

Heat treatment

Soil stabilizing agents

Thickening agents

(water-soluble homopolymers and copolymers treated by amines and ammonium salts subsequently by heat for improved environmental acceptability)

IT 25085-02-3P, **Acrylamide**-sodium **acrylate** copolymer  
 RL: IMF (Industrial manufacture); PREP (Preparation)  
 (water-soluble homopolymers and copolymers treated by amines and ammonium  
**salts** subsequently by heat for improved environmental  
 acceptability)

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L65 ANSWER 7 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:51971 CAPLUS

DOCUMENT NUMBER: 136:85340

TITLE: Free flowing nitrogen **fertilizer** composition  
 with enhanced deposition/anti drift characteristics

INVENTOR(S): Brigance, Mickey; McManic, Greg

PATENT ASSIGNEE(S): Adjuvants Unlimited Inc., USA

SOURCE: U.S. Pat. Appl. Publ., 7 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002006874	A1	20020117	US 2001-761643	20010118
US 6423109	B2	20020723		
US 2003126900	A1	20030710	US 2002-193728	20020711
PRIORITY APPLN. INFO.:			US 2000-176617P	P 20000119
			US 2001-761643	A1 20010118

ED Entered STN: 18 Jan 2002

AB A free-flowing fertilizer comprising: (i) from 25 to 99.5% by weight of a  
 powdered water soluble nitrogen containing fertilizer; (ii) from 0.05 to 1.5%  
 by weight

of a polyacrylamide liquid emulsion/dispersion; (iii) from 0.1 to 3.0% by  
 weight of a polyacrylamide powder whose particle size is primarily 50 to 100  
 mesh in size is disclosed.

IC ICM A01N025-04

ICS C05C009-00; C05C011-00

INCL 504361000

CC 19-6 (Fertilizers, Soils, and Plant Nutrition)

ST nitrogen **fertilizer** low drift spray

IT Diatomite

RL: MOA (Modifier or additive use); USES (Uses)

(deposition enhancer/drift reducer in free flowing nitrogen  
**fertilizer** composition)

IT Sequestering agents

(in free flowing nitrogen **fertilizer** composition with enhanced  
 deposition/anti drift characteristics)

IT Clathrates

RL: MOA (Modifier or additive use); USES (Uses)

(in free flowing nitrogen **fertilizer** composition with enhanced  
 deposition/anti drift characteristics)

IT **Fertilizers**

RL: AGR (Agricultural use); PNU (Preparation, unclassified); BIOL

(Biological study); PREP (Preparation); USES (Uses)

(nitrogen, powdered, water soluble; free flowing nitrogen **fertilizer**  
 composition with enhanced deposition/anti drift characteristics)

IT Surfactants

(nonionic, powdered; in free flowing nitrogen **fertilizer** composition  
 with enhanced deposition/anti drift characteristics)

- IT Antifoaming agents  
(powdered, silicone; in free flowing nitrogen **fertilizer** composition with enhanced deposition/anti drift characteristics)
- IT 25085-02-3, Magnafloc 156  
RL: MOA (Modifier or additive use); USES (Uses)  
(deposition enhancer/drift reducer in free flowing nitrogen **fertilizer** composition)
- IT 57-13-6, Urea, biological studies 6484-52-2, Ammonium nitrate, biological studies 7757-79-1, Potassium nitrate, biological studies 7783-20-2, Ammonium Sulfate, biological studies 7783-28-0, Diammonium phosphate.  
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)  
(free flowing nitrogen **fertilizer** composition with enhanced deposition/anti drift characteristics containing)
- IT 9003-05-8D, Polyacrylamide, derivs. 386707-08-0, Percol E 38  
RL: MOA (Modifier or additive use); USES (Uses)  
(liquid emulsion/dispersion; deposition enhancer/drift reducer in free flowing nitrogen **fertilizer** composition)
- IT 60-00-4, Ethylene diamine tetra acetic acid, uses 77-92-9, Citric acid, uses 7632-50-0, Ammonium Citrate 7664-38-2, Phosphoric acid, uses 10124-31-9, Ammonium Phosphate  
RL: MOA (Modifier or additive use); USES (Uses)  
(sequestering agent in free flowing nitrogen **fertilizer** composition with enhanced deposition/anti drift characteristics)

L65 ANSWER 8 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:244766 CAPLUS

DOCUMENT NUMBER: 136:280891

TITLE: Organopolysiloxane-containing water-based compositions for **soiling**-resistant coatings with good storage **stability**

INVENTOR(S): Yokota, Masahisa; Okita, Koji

PATENT ASSIGNEE(S): Asahi Chemical Industry Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002097417	A2	20020402	JP 2001-78788	20010319
PRIORITY APPLN. INFO.:			JP 2000-215687	A 20000717

ED Entered STN: 02 Apr 2002

AB The compns. contain waterborne resins and organopolysiloxanes bearing alkyl, aryl and carboxyl groups. Thus, heating a mixture of Me Ph H silicone (Mn 5000) 100, dioxane 100 and a 5% i-PrOH solution of platonic chloride 0.11 to 80°, adding a 30% dioxane solution of 5-norbornene-2,3-dicarboxylic anhydride 10 over 30 min, and mixing for 1 h gave an acid anhydride-containing polyorganosiloxane solution, 10 parts of which was combined with 1 part Et3N and 0.5 parts water and mixed for 30 min at room temperature. Mixing 7.4 g a dispersion containing the resulting product above in water to 15% solids content with 50 g a latex containing 46% NH3-neutralized Bu acrylate-methacrylic acid-Me methacrylate copolymer gave a composition with good storage stability.

IC ICM C09D201-00

ICS C08G077-04; C08L083-04; C08L101-00; C09D005-02; C09D133-00;



C09D175-04; C09D183-04; C09D183-07; C09D201-04  
 CC 42-10 (Coatings, Inks, and Related Products)  
 ST antisoiling coating acrylic latex carboxylic polyorganosiloxane compn  
 storage **stability**  
 IT Polysiloxanes, uses  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP  
 (Properties); TEM (Technical or engineered material use); PREP  
 (Preparation); USES (Uses)  
 (Me Ph hydrogen, reaction products with norbornene-2,3-dicarboxylic  
 anhydride; organopolysiloxane-containing water-based compns. for  
**soiling**-resistant coatings with good storage **stability**  
 )  
 IT 31049-18-ODP, Norbornene-2,3-dicarboxylic anhydride, reaction products  
 with H polyorganosiloxane, triethylamine salts 42884-82-2P, Butyl  
 acrylate-methacrylic acid-methyl methacrylate copolymer ammonium salt  
 70634-81-0P, Butyl **acrylate**-diacetone **acrylamide**  
 -methacrylic acid copolymer ammonium salt  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP  
 (Properties); TEM (Technical or engineered material use); PREP  
 (Preparation); USES (Uses)  
 (organopolysiloxane-containing water-based compns. for **soiling**  
 -resistant coatings with good storage **stability**)

L65 ANSWER 9 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2000:314651 CAPLUS  
 DOCUMENT NUMBER: 132:307820  
 TITLE: **Fertilizer** compositions comprising  
 anti-drift agents  
 INVENTOR(S): Rose, Simon Alexander Hanson; Snowden, Jayne Anne  
 PATENT ASSIGNEE(S): Ciba Specialty Chemicals Water Treatments Limited, UK  
 SOURCE: PCT Int. Appl., 31 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000026160	A1	20000511	WO 1999-EP7995	19991021
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1129052	A1	20010905	EP 1999-953910	19991021
EP 1129052	B1	20040630		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
AU 761016	B2	20030529	AU 2000-10423	19991021
AT 270259	E	20040715	AT 1999-953910	19991021
IL 142495	A1	20040725	IL 1999-142495	19991021
PT 1129052	T	20041130	PT 1999-953910	19991021
ES 2222741	T3	20050201	ES 1999-953910	19991021
US 6288010	B1	20010911	US 1999-428100	19991027
ZA 2001003368	A	20011128	ZA 2001-3368	20010425

## PRIORITY APPLN. INFO.:

GB 1998-23752  
WO 1999-EP7995A 19981030  
W 19991021

ED Entered STN: 15 May 2000

AB An aqueous composition comprises a inorg. water-soluble compound in an amount of at least

10 % and an anti-drift agent which is a water soluble anionic polymer of intrinsic viscosity at least 6 dL/g, which is formed from a water-soluble monomer or monomer blend. The water-soluble polymer is present in an amount up to 1.9 weight % based on weight of composition The composition can be a

liquid fertilizer

concentrate that can conveniently be applied through conventional spray distribution equipment, without the need for addnl. dosing of anti-drift control chems. Said composition (1) can be a low viscosity liquid anti-drift agent that can be combined with a herbicide or pesticide in conventional spray distribution equipment.

IC ICM C05G003-02

ICS C05G003-00

CC 19-6 (Fertilizers, Soils, and Plant Nutrition)

Section cross-reference(s): 5

ST fertilizer herbicide compn antidrift agents

IT Fertilizers

Polyphosphates

RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)  
(fertilizer formulations containing anti-drift agents)

IT 25085-02-3, Sodium acrylate-acrylamide polymer 69418-26-4

RL: MOA (Modifier or additive use); USES (Uses)

(anti-drift agent for fertilizer and herbicide formulations)

IT 6484-52-2, Ammonium nitrate, biological studies 7447-40-7, Potassium

chloride, biological studies 7722-76-1, Monoammonium phosphate

7778-77-0, MonoPotassium phosphate 7778-80-5, Potassium sulfate,

biological studies 7783-20-2, Ammonium sulfate, biological studies

7783-28-0, Diammonium phosphate 10124-37-5, Calcium nitrate

RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)

(fertilizer formulations containing anti-drift agents)

REFERENCE COUNT:

5

THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L65 ANSWER 10 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1999:728153 CAPLUS

DOCUMENT NUMBER: 131:322105

TITLE: Manufacture of cultivation soil from dewatered sludge  
cake of inorganic wastewater

INVENTOR(S): Kato, Nobuo; Nishimura, Hiroyuki; Abiko, Seiji

PATENT ASSIGNEE(S): Telnite Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11315280	A2	19991116	JP 1998-122119	19980501
PRIORITY APPLN. INFO.:			JP 1998-122119	19980501

ED Entered STN: 17 Nov 1999

AB The soil is manufactured by (1) mixing dewatered cake of inorg. sludge with water-soluble polymers, (2) classifying the mixture, (3) adding soil amendments such as bark compost, leaf mold, peat moss, etc., and optionally fertilizers to the mixture, and then (4) curing the mixture Lime-based

solidifying agents and/or CaO may be added after the addition of water-soluble polymers and neutralization of pH may be performed before the curing process by contacting with air. Dewatered cake obtained from flocculation process for quarry wastewater was kneaded with guar gum and the mixture was sieved to remove  $\leq 1$  mm and  $\geq 10$  mm particles,. The sieved product was cured indoors for 7 days and then mixed with bark compost to give plant cultivation soil. The soil was further mixed with complex fertilizer and Ca superphosphate and used for cultivation of komatsuna.

- IC ICM C09K017-48  
ICS C02F011-00; C09K101-00
- CC 19-6 (Fertilizers, Soils, and Plant Nutrition)
- IT Leaf  
Sawdust  
(compost; manufacture of cultivation soil from dewatered sludge cake of inorg. wastewater, soil amendments, and optionally **fertilizers**)
- IT Wastewater treatment sludge  
(dewatered; manufacture of cultivation soil from dewatered sludge cake of inorg. wastewater, soil amendments, and optionally **fertilizers**)
- IT Rice (Oryza sativa)  
Rice (Oryza sativa)  
(husk, compost; manufacture of cultivation soil from dewatered sludge cake of inorg. wastewater, soil amendments, and optionally **fertilizers**)
- IT Compost  
Gums and Mucilages  
Recycling  
Soil amendments  
Sphagnum  
(manufacture of cultivation soil from dewatered sludge cake of inorg. wastewater, soil amendments, and optionally **fertilizers**)
- IT **Fertilizers**  
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)  
(manufacture of cultivation soil from dewatered sludge cake of inorg. wastewater, soil amendments, and optionally **fertilizers**)
- IT Mining  
(quarry; manufacture of cultivation soil from dewatered sludge cake of inorg. wastewater, soil amendments, and optionally **fertilizers**)
- IT Chaff  
Chaff  
(rice husk, compost; manufacture of cultivation soil from dewatered sludge cake of inorg. wastewater, soil amendments, and optionally **fertilizers**)
- IT Polymers, biological studies  
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)  
(water-soluble; manufacture of cultivation soil from dewatered sludge cake of inorg. wastewater, soil amendments, and optionally **fertilizers**)
- IT 9004-32-4, Carboxymethyl cellulose  
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)  
(1400LC; manufacture of cultivation soil from dewatered sludge cake of inorg. wastewater, soil amendments, and optionally **fertilizers**)
- IT 25085-02-3, Acrylamide-sodium acrylate copolymer  
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)  
(A 140; manufacture of cultivation soil from dewatered sludge cake of inorg. wastewater, soil amendments, and optionally **fertilizers**)

IT 9000-30-0, Guar gum 9004-34-6D, Cellulose, derivs., biological studies  
 9005-25-8, Starch, biological studies 9005-32-7, Alginic acid  
 9005-38-3, Sodium alginate  
 RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)  
 (manufacture of cultivation soil from dewatered sludge cake of inorg.  
 wastewater, soil amendments, and optionally **fertilizers**)

IT 1305-78-8, Calcium oxide, biological studies  
 RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)  
 (solidifying agent; manufacture of cultivation soil from dewatered sludge  
 cake of inorg. wastewater, soil amendments, and optionally  
**fertilizers**)

L65 ANSWER 11 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1999:78425 CAPLUS  
 DOCUMENT NUMBER: 130:138821  
 TITLE: Soil amendment **fertilizers** containing  
 water-soluble copolymers and minerals  
 INVENTOR(S): Endo, Ryuichi; Masago, Tomoyuki  
 PATENT ASSIGNEE(S): Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11029387	A2	19990202	JP 1997-197929	19970708

PRIORITY APPLN. INFO.:  
 ED Entered STN: 05 Feb 1999  
 AB The fertilizers, which show long-lasting fertilizing effect on infertile  
 soil, comprise water-sol copolymers and mineral components contained  
 therein. A liquid fertilizer containing acrylamide-K acrylate copolymer, N,  
 PO<sub>4</sub>, and K was applied to desert soil increased yields of wheat and corn.  
 Toxicity of the fertilizer on carp was very low.

IC ICM C05G003-00  
 ICS C05D001-00; C05F005-00; C05F007-00; C05G001-00; C09K017-48;  
 C09K101-00

CC 19-5 (Fertilizers, Soils, and Plant Nutrition)  
 ST water sol copolymer mineral soil amendment; **fertilizer** water sol  
 copolymer mineral; acrylamide potassium acrylate copolymer mineral  
**fertilizer**

IT **Fertilizers**  
 RL: AGR (Agricultural use); BAC (Biological activity or effector, except  
 adverse); BSU (Biological study, unclassified); BIOL (Biological study);  
 USES (Uses)  
 (nitrogen-phosphorus-potassium; sustained-release soil amendment  
**fertilizers** containing water-soluble copolymers and minerals)

IT Soil amendments  
 (sustained-release soil amendment **fertilizers** containing  
 water-soluble copolymers and minerals)

IT Mineral elements, biological studies  
 RL: AGR (Agricultural use); BAC (Biological activity or effector, except  
 adverse); BSU (Biological study, unclassified); BIOL (Biological study);  
 USES (Uses)  
 (sustained-release soil amendment **fertilizers** containing  
 water-soluble copolymers and minerals)

IT **Fertilizers**  
 RL: ADV (Adverse effect, including toxicity); AGR (Agricultural use); BAC

(Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)

(sustained-release; sustained-release soil amendment

**fertilizers** containing water-soluble copolymers and minerals)

IT Polymers, biological studies

RL: ADV (Adverse effect, including toxicity); AGR (Agricultural use); BIOL (Biological study); USES (Uses)

(water-soluble; sustained-release soil amendment **fertilizers** containing water-soluble copolymers and minerals)

IT 31212-13-2, Acrylamide-potassium acrylate copolymer

RL: ADV (Adverse effect, including toxicity); AGR (Agricultural use); BIOL (Biological study); USES (Uses)

(sustained-release soil amendment **fertilizers** containing water-soluble copolymers and minerals)

L65 ANSWER 12 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2000:158065 CAPLUS

DOCUMENT NUMBER: 132:166748

TITLE: Preparation and application of acrylic acid copolymer dispersant

INVENTOR(S): Tanaka, Katsutoshi; Sato, Kazuyuki; Miyahara, Isao

PATENT ASSIGNEE(S): Hymo Corp., Japan

SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 22 pp.  
CODEN: CNXXEV

DOCUMENT TYPE: Patent

LANGUAGE: Chinese

FAMILY ACC. NUM. COUNT: 6

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1187494	A	19980715	CN 1997-120209	19971105
CN 1112377	B	20030625		
JP 10131081	A2	19980519	JP 1996-307496	19961105
JP 3260288	B2	20020225		
JP 10212320	A2	19980811	JP 1997-28298	19970129
JP 10316968	A2	19981202	JP 1997-146038	19970521
JP 10331100	A2	19981215	JP 1997-153124	19970528
JP 3260297	B2	20020225		

PRIORITY APPLN. INFO.:	JP 1996-307496	A	19961105
	JP 1997-28298	A	19970129
	JP 1997-146038	A	19970521
	JP 1997-153124	A	19970528
	JP 1997-183188	A	19970625

ED Entered STN: 10 Mar 2000

AB The dispersion is prepared by dissolving acrylic acid or methacrylic acid and acrylamide in salt solution, adding dispersion protective agent, polymerizing

in presence of initiator under bubbling N<sub>2</sub> to obtain the product with the polymer concentration of >5% and the particle diameter of 1-100 µm, and adjusting

pH to 7.0 to make a polymer solution. The composition of acrylic acid is 15-100 mol% and that of acrylamide is 0-85 mol%. The dispersion protective agent is selected from one or more of dimethyldiallylammonium chloride polymer, and acrylamido-2-methylpropanesulfonic acid polymer. The ratio of acrylic acid to dispersion protective agent is 100-10:1. The dispersion is used for preparation of paper, for improvement of soil, and for prevention of laminated material stripping, and as flocculant. The paper is made by dispersing cellulose pulp and filler in water, regulating pH to 6.5-10, mixing with cationic polymer, adding the dispersion, and making paper.

The cationic polymer is selected from cationic starch, cationic polyacrylamide, and their mixture. The soil is improved by adding the dispersing polymer to the soil with the water content of 20-400%, the addition of the dispersing polymer is 0.1-5 kg/m<sup>3</sup>. The laminated material stripping is prevented by spraying the dispersion on the surface of the substrate material, overlapping, pressing, and drying.

- IC ICM C08F020-10  
ICS C08F002-16
- CC 35-4 (Chemistry of Synthetic High Polymers)  
Section cross-reference(s): 38, 43, 44
- IT **Soils**  
(preparation and soil application of acrylic acid copolymer dispersant)
- IT Dispersion (of materials)  
(**stabilizer**; preparation and paper/pulp additive application of acrylic acid-acrylamide copolymer dispersant containing cationic starch)
- IT 26062-79-3, Dimethyldiallylammonium chloride homopolymer 27119-07-9D, AMPS homopolymer, sodium **salt**  
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)  
(dispersant **stabilizer**; preparation and application of **acrylic acid-acrylamide** copolymer dispersant containing)
- IT 9003-06-9DP, **Acrylic acid-acrylamide** copolymer, sodium **salt** 9003-06-9P, Acrylic acid-acrylamide copolymer  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(preparation and application of **acrylic acid-acrylamide** copolymer dispersant)

L65 ANSWER 13 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1995:589446 CAPLUS  
DOCUMENT NUMBER: 122:320908  
TITLE: Method of **soil** strengthening  
INVENTOR(S): Ezaki, Atsushi; Hosoya, Yoshio  
PATENT ASSIGNEE(S): Mitsui Saitekku KK, Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07001000	A2	19950106	JP 1993-169859	19930617
PRIORITY APPLN. INFO.:			JP 1993-169859	19930617
ED Entered STN: 06 Jun 1995				
AB Soil is first mixed with an anionic hydrophilic polymer then with a water-soluble multi-valent metal salt, and water is removed from it to give a modified soil having cone index increased by $\geq 2$ kg/cm <sup>2</sup> . The polymer is selected from (meth)acrylate-acrylamide copolymer, and the metal salt is selected from aluminum sulfate, aluminum chloride, calcium carbonate, polyaluminum chloride, and calcium chloride.				
IC	ICM	C02F011-14		
	ICS	E02F007-00		
ICA		C02F011-00		
CC	58-5 (Cement, Concrete, and Related Building Materials)			
ST	<b>soil</b> strengthening anionic hydrophilic polymer; metal			

multivalent salt soil strengthening  
 IT **Soil stabilization**  
 (anionic hydrophilic polymer for soil strengthening)  
 IT 471-34-1, Calcium carbonate, uses 1327-41-9, Polyaluminum chloride  
 7446-70-0, Aluminum chloride, uses 7705-08-0, Ferric chloride, uses  
 10043-01-3, Aluminum sulfate 10043-52-4, Calcium chloride, uses  
 24991-37-5, Acrylamide-sodium methacrylate copolymer 25987-30-8,  
**Acrylic acid-acrylamide copolymer sodium**  
**salt**  
 RL: NUU (Other use, unclassified); USES (Uses)  
 (in soil strengthening)

L65 ANSWER 14 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1993:6224 CAPLUS

DOCUMENT NUMBER: 118:6224

TITLE: Grain sorghum response to granular formulations of  
 iron sources and hydrophilic polymers

AUTHOR(S): Mortvedt, J. J.; Mikkelsen, R. L.; Behel, A. D., Jr.

CORPORATE SOURCE: Natl. Fert. Environ. Res. Cent., Tennessee Valley  
 Author., Muscle Shoals, AL, 35660, USA

SOURCE: Journal of Plant Nutrition (1992), 15(10), 1913-26  
 CODEN: JPNUDS; ISSN: 0190-4167

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 10 Jan 1993

AB Banded hydrogels containing FeSO<sub>4</sub> provide available Fe for plants on  
 calcareous, Fe-deficient soils. Because granular mixts. of gel-forming  
 polymers and Fe sources would be easier to apply to soil than hydrogels,  
 several such granular products were compared with banded hydrogels in  
 greenhouse pot expts. Several FeSO<sub>4</sub> + gel-forming polymer  
 (polyacrylamide) formulations were granulated in a rotary tableting press  
 and band applied to an Fe-deficient Epping silt loam soil (Ustic  
 Torriorthent). None of the granular formulations of FeSO<sub>4</sub> + polymers  
 banded alone or with other additives (urea, ammonium sulfate, or bentonite  
 clay) was effective in providing available Fe to grain sorghum (Sorghum  
 bicolor). However, a granular formulation of FeEDTA + polymer increased  
 sorghum dry matter yields and Fe uptake. Banded hydrated polymer  
 formulations containing either FeEDTA or FeSO<sub>4</sub> also were effective in  
 providing available Fe to sorghum. Results of an associated laboratory  
 experiment

showed that some gel formation occurred at granule sites of the FeSO<sub>4</sub> +  
 polymer formulations within 1 wk after soil application. Apparently, gel  
 formation was inadequate to affect Fe reactions with the soil to form  
 unavailable products. Limited gel formation with granular products may  
 have resulted from insufficient free water in soil, high solute concns. in  
 the soil solution surrounding the granules, or hard granules. Thus, granular  
 products of FeSO<sub>4</sub> with polymers may not be effective for soil application  
 unless other polymers, additives, or ratios of polymers, additives, and  
 FeSO<sub>4</sub> can be identified.

CC 19-5 (Fertilizers, Soils, and Plant Nutrition)

ST iron fertilizer polymer formulation sorghum; granule iron  
 polymer formulation soil

IT Bentonite, biological studies

RL: BIOL (Biological study)

(fertilizer additive, iron availability from iron-polymer  
 granular formulations in relation to)

IT Sorghum

(fertilizer experiment with, with iron-polymer granular  
 formulations)

IT Polymers, biological studies

RL: BIOL (Biological study)  
 (hydrophilic, iron **fertilizer** granules formulated with,  
 sorghum response to, hydration in soil in relation to)

IT **Fertilizer** experiment  
 (with iron-polymer granular formulations, with sorghum)

IT Soils  
 (Ustic Torriorthents, iron-polymer **fertilizer** granular  
 formulations gelation and hydration degree in)

IT Agrochemical formulations  
 (granules, of iron **fertilizer** with gel-forming polymers,  
 sorghum response to, hydration in soil in relation to)

IT **Fertilizers**  
 RL: BIOL (Biological study)  
 (iron, granular formulations with polymers, gelation and hydration  
 degree of, in calcareous soils)

IT 7439-89-6, Iron, biological studies  
 RL: BIOL (Biological study)  
 (absorption of, by sorghum **fertilized** with iron-polymer  
 granular formulations)

IT 57-13-6, Urea, properties 7783-20-2, Ammonium sulfate, properties  
 RL: PRP (Properties)  
 (**fertilizer** additive, iron availability from iron-polymer  
 granular formulations in relation to)

IT 7720-78-7, Ferrous sulfate 17099-81-9  
 RL: BIOL (Biological study)  
 (**fertilizer** granules with gel-forming polymers, sorghum  
 response to, hydration in soil in relation to)

IT 9004-32-4 31212-13-2 110942-30-8, Terra-sorb 115003-69-5,  
 Aquastore  
 RL: BIOL (Biological study)  
 (iron **fertilizer** granules formulated with, sorghum response  
 to, hydration in soil in relation to)

L65 ANSWER 15 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1992:5832 CAPLUS  
 DOCUMENT NUMBER: 116:5832  
 TITLE: Polymeric hydrogel soil substitute  
 INVENTOR(S): Barbary, Salah  
 PATENT ASSIGNEE(S): Fr.  
 SOURCE: PCT Int. Appl., 29 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: French  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9111410	A1	19910808	WO 1990-FR79	19900201
W: AU, BB, BG, BR, CA, FI, HU, JP, KP, KR, LK, MC, MG, MW, NO, RO, SD, SU, US				
RW: AT, BE, BF, BJ, CF, CG, CH, CM, DE, DK, ES, FR, GA, GB, IT, LU, ML, MR, NL, SE, SN, TD, TG				
AU 9050474	A1	19910821	AU 1990-50474	19900201
PRIORITY APPLN. INFO.:			WO 1990-FR79	A 19900201
ED Entered STN: 11 Jan 1992				
AB A soil substitute, which incorporates N-P-K-trace element fertilizers, is made of a polymeric hydrogel, with high water-absorbing capacity. Granular cross-linked Na acrylate gel (7.5 kg) was treated with 2.5 L liquid fertilizer (160 g solids) and dried at 70°. The product was mixed				



with sandy soil and tested in pot for the culture of ryegrass and trefoil.  
The composition may also be used for seed coating.

- IC ICM C05G003-00  
ICS A01C001-06
- CC 19-2 (Fertilizers, Soils, and Plant Nutrition)
- IT Aloe (genus)  
Chamomile  
(extract, **fertilizers** containing, in hydrogel soil substitutes)
- IT Bacteria  
Cyanobacteria  
Yeast  
(**fertilizer** containing, in hydrogel polymers soil substitutes)
- IT Lime (chemical)  
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)  
(**fertilizer** containing, in hydrogel polymers soil substitutes)
- IT Myrrh  
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)  
(**fertilizer** containing, in hydrogel soil substitutes)
- IT Mint  
(**fertilizers** containing, in hydrogel soil substitutes)
- IT Angelica  
Ginseng  
Rhubarb  
Thistle  
(root extract, **fertilizer** containing, in hydrogel soil substitutes)
- IT **Fertilizers**  
RL: OCCU (Occurrence)  
(nitrogen-phosphorus-potassium-trace element, hydrogel polymer soil substitutes containing)
- IT 7439-89-6, Iron, biological studies 7439-98-7, Molybdenum, biological studies 7440-42-8, Boron, biological studies 7440-50-8, Copper, biological studies 7440-66-6, Zinc, biological studies  
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)  
(**fertilizer** containing, hydrogel polymer soil substitute containing)
- IT 7704-34-9, Sulfur, biological studies 7761-88-8, Silver nitrate, biological studies  
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)  
(**fertilizer** containing, in hydrogel polymers soil substitutes)
- IT 76-22-2, Camphor  
RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)  
(**fertilizer** containing, in hydrogel soil substitutes)
- IT 9004-34-6, Cellulose, biological studies 9004-34-6D, Cellulose, polymers with acrylic compds. 9005-25-8, Starch, biological studies 25085-02-3 31212-13-2  
RL: BIOL (Biological study)  
(soil substitute hydrogel containing)

L65 ANSWER 16 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1991:444215 CAPLUS  
DOCUMENT NUMBER: 115:44215  
TITLE: Aqueous pesticide dispersions, prepared using  
coacervating polymers  
INVENTOR(S): Chamberlain, Peter; Langley, John Graham  
PATENT ASSIGNEE(S): Allied Colloids Ltd., UK  
SOURCE: Eur. Pat. Appl., 10 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 8  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 379379	A2	19900725	EP 1990-300554	19900118
EP 379379	A3	19910619		
EP 379379	B1	19941130		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL				
ES 2066116	T3	19950301	ES 1990-300554	19900118
CA 2008139	AA	19900720	CA 1990-2008139	19900119
AU 9048579	A1	19900726	AU 1990-48579	19900119
AU 639432	B2	19930729		
ZA 9000406	A	19910327	ZA 1990-406	19900119
PRIORITY APPLN. INFO.:			GB 1989-1254	A 19890120
ED Entered STN: 10 Aug 1991				
AB A stable dispersion comprises insol. pesticide particles incorporated into a polymer coacervate shells. The coacervate is preferably formed from a soluble low mol.-weight cationic polymer and a soluble high mol.-weight anionic polymer. A solution A comprised 120 g poly(iso-Bu acrylate) and 120 g chlorpyrifos in 520 g CH <sub>2</sub> Cl <sub>2</sub> , solution B 168 g 20% poly(acrylamide-Na acrylate) in 600 g water, and solution C 76 g 35% BC777 (cationic urea-formaldehyde resin) in 100 g water. Solns. C and A were added, under stirring to solution B, to give an emulsion. CH <sub>2</sub> Cl <sub>2</sub> was distilled off at 45°, under reduced pressure, to give a dispersion. The dispersion, was sprayed on cauliflower, to control the cabbage root fly.				
IC ICM B01J013-02				
ICS A01N025-00; A01N025-28				
CC 5-1 (Agrochemical Bioregulators)				
Section cross-reference(s): 38				
IT <b>Fertilizers</b>				
Plant hormones and regulators				
RL: PROC (Process)				
(dispersions of, aqueous, polymer coacervates in)				
IT 9010-88-2 25085-02-3 134688-95-2, BC 777				
RL: BIOL (Biological study)				
(pesticide aqueous dispersion by coacervation with)				
L65 ANSWER 17 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN				
ACCESSION NUMBER: 1983:574837 CAPLUS				
DOCUMENT NUMBER: 99:174837				
TITLE: Soil amendment production				
PATENT ASSIGNEE(S): Nitto Chemical Industry Co., Ltd., Japan				
SOURCE: Jpn. Tokkyo Koho, 6 pp.				
CODEN: JAXXAD				
DOCUMENT TYPE: Patent				
LANGUAGE: Japanese				
FAMILY ACC. NUM. COUNT: 1				
PATENT INFORMATION:				

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 58028313	B4	19830615	JP 1974-144080	19741217
PRIORITY APPLN. INFO.:			JP 1974-144080	19741217
ED Entered STN: 12 May 1984				
AB A granular soil amendment is formulated from acrylamide polymers, silicic acid or silicates and one or more of phosphates, nitrates, and sulfates, or free forms, of urea, guanylurea, guanidine, dicyanidiamide, and amidinothiourea. The product markedly improves aggregation of clayey soil. Thus, a composition containing powdered Na salt of acrylamide-acrylic acid copolymer [25987-30-8] (acrylamide/acrylic acid ratio 85:15,				

average mol. weight 3,000,000) 7, Na<sub>2</sub>CO<sub>3</sub> 0.4, amidinothiourea 5, burnt diatomaceous earth 90, and water 50 parts was granulated. The product had a high aggregation rate for kaolin.

IC C09K017-00

ICA C05C007-00; C05C009-00

CC 19-6 (Fertilizers, Soils, and Plant Nutrition)

ST amendment **fertilizer** compn soil

IT Soil amendments

**Fertilizers**

RL: BIOL (Biological study)

(manufacture of, acrylamide polymers and ureas and thioureas in)

IT 57-13-6, uses and miscellaneous 420-04-2 461-58-5 497-19-8,  
biological studies 1763-07-1 2114-02-5 17675-60-4

RL: USES (Uses)

(**fertilizer**-soil amendment containing acrylamide-acrylic acid copolymers and)

IT 25987-30-8

RL: BIOL (Biological study)

(**fertilizer**-soil amendment containing ureas and thioureas and)

L65 ANSWER 18 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1984:22107 CAPLUS

DOCUMENT NUMBER: 100:22107

TITLE: **Fertilizer** and amendment for the regulation  
of soil nutrients and water balance

INVENTOR(S): Horkay, Ferenc; Gati, Ferenc; Szirmai, Endre

PATENT ASSIGNEE(S): Hung.

SOURCE: Hung. Teljes, 17 pp.

CODEN: HUXXB

DOCUMENT TYPE: Patent

LANGUAGE: Hungarian

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
HU 25518	O	19830728	HU 1981-1549	19810525
HU 184446	B	19840928		

PRIORITY APPLN. INFO.: HU 1981-1549 19810525

ED Entered STN: 12 May 1984

AB Cross-linked copolymers and their salts, used as soil amendments, stimulate humus formation and have a pos. effect on the nutrient, ion, and water balances in the soil. The effects are related to the swelling capacity of these copolymers. Thus, a 2% addition of a mixture containing 9 parts

lignite and 1 part cross-linked styrene-K methacrylate copolymer [9003-57-0] increased the water-binding capacity of a sandy soil by 20% and the ion-binding capacity by 10%.

IC C05G003-00

CC 19-3 (Fertilizers, Soils, and Plant Nutrition)

IT 9003-57-0 9038-54-4 25155-93-5 26100-47-0 27176-41-6

31441-15-3 36732-16-8 52404-40-7 58499-16-4 65405-55-2

68568-84-3 71052-49-8 88209-88-5 88215-83-2 88215-84-3

88215-85-4 88215-86-5 88215-87-6 88215-89-8 88215-91-2

88215-92-3 88215-93-4 88215-94-5 88215-95-6 88215-96-7

88215-97-8 88215-99-0 88216-00-6 88216-01-7

RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)  
(as soil amendment)

L65 ANSWER 19 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1974:510701 CAPLUS  
 DOCUMENT NUMBER: 81:110701  
 TITLE: Composition for **soil strengthening**  
 INVENTOR(S): Permyakov, R. S.; Safrygin, Yu. S.; Kozlov, S. S.;  
 Parvenov, A. P.; Vatamanyuk, V. I.; Shumilov, I. N.  
 PATENT ASSIGNEE(S): All-Union Scientific-Research Institute of Halurgy  
 SOURCE: U.S.S.R. From: Otkrytiya, Izobret., Prom. Obraztsy,  
 Tovarnye Znaki 1973, 50(35), 99-100.  
 CODEN: URXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Russian  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
SU 395543	T	19730828	SU 1971-1697704	19710920
PRIORITY APPLN. INFO.:			SU 1971-1697704	A 19710920

ED Entered STN: 12 May 1984  
 AB Soil-strengthening agents consisting of 125-130 weight parts saturated salt solution and 8-30 weight parts synthetic binder improved the waterproofness of soil, especially in salt mines. The synthetic binder contained a mixture of vinyl monomers consisting of acrylamide 70-90, acrylic acid salt 20-5,  $\text{Ca}(\text{OH})_2 \leq 3$ , polyacrylamide 7-2, polymerization initiator 0.1-1.0, and polymerization accelerator 0.1-1.4%, based on the weight of the synthetic binder.  $(\text{NH}_4)_2\text{S}_2\text{O}_8$  was used as a polymerization initiator while Na hydrosulfate was used as a polymerization accelerator.  
 IC E02D; E21D  
 CC 58-4 (Cement and Concrete Products)  
 ST vinyl monomer **soil strengthening**; salt soln **soil waterproofing**; acrylamide **soil waterproofing**  
 IT **Soil stabilization**  
 (agents for, **acrylamide-acrylic acid salt polymer** for)  
 IT 2-Propenamide, polymer with acrylic acid salt  
 RL: USES (Uses)  
 (**soil stabilizers**)  
 IT 7681-38-1  
 RL: USES (Uses)  
 (polymerization accelerator, for acrylic compound polymer **soil stabilizers**)  
 IT 79-10-7D, 2-Propenoic acid, salts, polymer with acrylamide  
 RL: USES (Uses)  
 (**soil stabilizers**)

L65 ANSWER 20 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 1969:513711 CAPLUS  
 DOCUMENT NUMBER: 71:113711  
 TITLE: Acrylamide **soil stabilizer**  
 PATENT ASSIGNEE(S): Mitsubishi Rayon Co., Ltd.  
 SOURCE: Fr., 17 pp.  
 CODEN: FRXXAK  
 DOCUMENT TYPE: Patent  
 LANGUAGE: French  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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FR 1567390	19690516	FR	
DE 1767349		DE	
GB 1183456		GB	
US 3651002	19720321	US	19680422
PRIORITY APPLN. INFO.:		JP	19670504
		JP	19680208

ED Entered STN: 12 May 1984

AB Rapid-curing acrylamide (I) soil stabilizers with improved solidity and water impermeability were prepared from a I derivative, water-soluble crosslinking

agent, <10% Na (II) or ammonium acrylate, and Na, ammonium, Mg, or 2-hydroxyethyl methacrylate (III). Thus, a 45% aqueous solution containing I 4.5, II 0.15, methylenebisacrylamide (IV) 0.7, and III 0.5 part was held 10 days at 0°. No crystal separation was observed. The solution was diluted to 5.9%, 0.5 part (NH<sub>4</sub>)<sub>2</sub>S<sub>2</sub>O<sub>8</sub> and 0.5 part dimeth-ylaminoethanol added, and 100 parts of the resulting solution mixed with 320 parts sand. The composition hardened in 130 sec. to form a very solid and water-impermeable product having uniaxial compression resistance 7.1 kg./cm.<sup>2</sup> (after 2 hrs.) which remained almost constant after soaking 20 days in water. A 40% aqueous stabilizer solution containing 4.5 parts I and 0.7 part IV formed crystalline deposits

at 0°, and when mixed with sand gave a product with an uniaxial compression resistance of 4 kg./cm.<sup>2</sup> A 11.4% aqueous stabilizer solution (100 parts) containing I 8, 1,3-bis(acrylamidomethyl)-2-imidazolidinone 1.4, II 0.3, and Na methacrylate 1.7 parts was mixed with 320 parts sand in the presence of 0.5 part (NH<sub>4</sub>)<sub>2</sub>S<sub>2</sub>O<sub>8</sub> and 0.5 part di-methylaminopropionitrile, and the mass cured 131 sec. at 33° to give a product with uniaxial compression resistance (in appr. 2 hrs.) of 11 kg./cm.<sup>2</sup> Other stabilizers compns. were prepared from acrylonitrile and (or) N-methylolacrylamide, Cellosolve and (or) MeCN; N-methylpyrrolidinone, Me<sub>2</sub>S, Me<sub>2</sub>SO, and sulfolane.

IC C08F; E02D

CC 36 (Plastics Manufacture and Processing)

ST acrylamide resins; **soil stabilizers**IT **Soils**

(stabilizers for, acrylamide copolymers as)

IT 75-05-8, Acetonitrile

RL: USES (Uses)

(as **soil stabilizers**)

IT 110-26-9 924-42-5 19415-92-0 21989-10-6

RL: USES (Uses)

(polymers with **acrylamide** and **acrylic acid salts**, as **soil stabilizers**)

IT 79-06-1, Acrylamide 107-13-1, Acrylonitrile, uses and miscellaneous

868-77-9 5536-61-8 7446-81-3 10604-69-0 16325-47-6

RL: USES (Uses)

(polymers with acrylamide derivs., as **soil stabilizers**)

IT 7095-16-1

RL: USES (Uses)

(polymers with acrylic acid derivs., as **soil stabilizers**)

L65 ANSWER 21 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1969:471639 CAPLUS

DOCUMENT NUMBER: 71:71639

TITLE: **Soil stabilization**

INVENTOR(S): Higashimura, Einosuke; Tazawa, Shunsuke; Nakamura,

PATENT ASSIGNEE(S): Eiichi  
 Mitsubishi Rayon Co., Ltd.; Nitto Chemical Industry  
 Co., Ltd.  
 SOURCE: Ger. Offen., 23 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 1811838		19690710	DE 1968-1811838	19681129
FR 1593759			FR	
US 3596469		19710803	US	19681129
			JP	19671130

PRIORITY APPLN. INFO.:  
 ED Entered STN: 12 May 1984  
 AB Soil was stabilized by a mixture consisting of polymerizable compds. and a redox catalyst system of citric acid or tartaric acid (I) and metal complex. Thus, 10 parts of an aqueous solution containing 0.4 part (dimethylamino)propionitrile and 10 parts of an aqueous solution containing 0.025 part FeSO<sub>4</sub> and 0.025 part I was added to 40 parts of an aqueous solution containing acrylamide 3, Na acrylate 0.15, Mg methacrylate 0.5, and 1,3-bis(acryloylaminomethyl)-2-imidazolidone 0.48 part. To the solution was added 0.5 part (NH<sub>4</sub>)<sub>2</sub>S<sub>2</sub>O<sub>8</sub> and the mixture diluted to 100 parts with H<sub>2</sub>O. To 100 parts of the above solution was added 300 parts standard sand and the mixture left standing 10 sec. in air at 10° to give a water-impermeable, water-insol., tough sand gel. The compressive strength after 2 hrs. was 6 kg./cm.<sup>2</sup> Other compds. used in similarly prepared compns. were acetylacetone, nitrilotriacetic acid, NH<sub>4</sub> oxalate, methylolacrylamide, SnCl<sub>2</sub>, AgNO<sub>3</sub>, MgSO<sub>4</sub>, triethanolamine, (diethylamino)ethanol, morpholine, N,N,N',N'-tetraethylenetetramine (?), and triethylenetetramine.  
 IC E02D  
 CC 37 (Plastics Fabrication and Uses)  
 ST **soil stabilization** polymers; **stabilization**  
 soil polymers; polymers **soil stabilization**  
 IT Polymerization  
 (redox, vinyl compds. for, in presence of soil)  
 IT **Soils**  
 (stabilization of, by acrylamide copolymers)  
 IT 2-Imidazolidinone, 1,3-bis(acrylamidomethyl)-, polymer with acrylamide, magnesium methacrylate and sodium acrylate  
 Acrylamide, polymer with magnesium methacrylate, N,N'-[(2-oxo-1,3-imidazolidinediyl)dimethylene]bis[acrylamide] and sodium acrylate  
 Acrylamide, N,N'-[(2-oxo-1,3-imidazolidinediyl)dimethylene]bis-, polymer with acrylamide, magnesium methacrylate and sodium acrylate  
 Acrylic acid, sodium salt, polymer with acrylamide, magnesium methacrylate and N,N'-[(2-oxo-1,3-imidazolidinediyl)dimethylene]bis[acrylamide]  
 Methacrylic acid, magnesium salt, polymer with acrylamide, N,N'-[(2-oxo-1,3-imidazolidinediyl)dimethylene]bis[acrylamide] and sodium acrylate  
 RL: USES (Uses)  
 (stabilization of soils with)

L65 ANSWER 22 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 1969:48346 CAPLUS

DOCUMENT NUMBER: 70:48346  
 TITLE: **Soil stabilization with crosslinked acrylate polymers**  
 INVENTOR(S): Higashimura, Einosuke; Ishii, Masao; Ishikawa, Yoshio  
 PATENT ASSIGNEE(S): Mitsubishi Rayon Co., Ltd.  
 SOURCE: U.S., 5 pp.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3417567	A	19681224	US 1967-623557	19670316
NL 6704061	A	19670919	NL 1967-4061	19670317
PRIORITY APPLN. INFO.:			JP 1966-16806	A 19660318
			JP 1966-16807	A 19660318

ED Entered STN: 12 May 1984

AB An aqueous soluble of an acrylate monomer and 1 or more addnl. copolymerizable monomers is mixed with soil in the presence of a redox catalyst and polymerized to provide a water-insol. stable soil aggregate. The process is used to strengthen foundations and to provide grouting in civil engineering applications. Thus, an aqueous solution containing 9 parts Ca acrylate

(I) and 0.1 part dimethylaminopropionitrile in 50 parts H<sub>2</sub>O was mixed with a solution of 0.1 part (NH<sub>4</sub>)<sub>2</sub>S<sub>2</sub>O<sub>8</sub> and 20 parts H<sub>2</sub>O at 20°. Polymerization occurred after apprx. 5 min. and a gel formed. I and a catalyst were mixed with sand in a mold and polymerization started after 15 min. A water-insol. product was obtained after 3 hrs. Other monomers used were glycerol diacrylate, the reaction product of glycidyl acrylate with aminoethyl acrylate, ethylenediamine, triethanolamine, and tetraethylene glycol monoacrylate, Mg acrylate, hydroxyethyl methacrylate, dimethylaminoethyl methacrylate, the reaction product of glycerol with methacrylate, and acrylamide. Catalyst systems contained Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>, NaHSO<sub>3</sub>, and K<sub>2</sub>S<sub>2</sub>O<sub>8</sub>. The compression strength of sand aggregates ranged from 0.3-7.1 kg./cm.<sup>2</sup> with corresponding water permeation coefficient of 4 + 10<sup>-4</sup> - 9.1 + 10<sup>-8</sup> cm./sec.

INCL 061036000

CC 37 (Plastics Fabrication and Uses)

ST acrylate **soil stabilization; stabilization**  
 acrylate soil; **soil stabilization** acrylate

IT **Soils**

(**stabilization** of, with vinyl compound polymers)

IT 1,2-Propanediol, 3,3',3''-[nitrilotris(ethyleneoxy)]tri-, 1,1',1''-triacrylate, polymer with calcium acrylate  
 1,2-Propanediol, 3,3'-(ethylenediimino)di-, 1,1'-diacrylate, polymer with calcium acrylate and 2-(dimethylamino)ethyl methacrylate  
 1,2-Propanediol, 3-(2-hydroxyethoxy)-, 1-acrylate 3-methacrylate, polymer with calcium acrylate and 2-hydroxyethyl methacrylate  
 1,2-Propanediol, 3-[(2-hydroxyethyl)amino]-, 1,3-diacrylate, polymer with calcium acrylate and 2-hydroxyethyl acrylate  
 3,6,9,12-Tetraoxapentadecane-1,14,15-triol, 1,15-diacrylate, polymer with 2-hydroxyethyl methacrylate and magnesium acrylate  
 Acrylamide, polymer with calcium acrylate and diacrylin  
 Acrylamide, polymer with diacrylin  
 Acrylic acid, 1,15-diester with 3,6,9,12-tetraoxapentadecane-1,14,15-triol, polymer with 2-hydroxyethyl methacrylate and magnesium acrylate  
 Acrylic acid, 1,1',1''-triester with 3,3',3''-[nitrilotris(ethyleneoxy)]tri-1,2-propanediol, polymer with calcium

## acrylate

Acrylic acid, 1,1'-diester with 3,3'-(ethylenediimino)di-1,2-propanediol, polymer with calcium acrylate and 2-(dimethylamino)ethyl methacrylate

Acrylic acid, 1,3-diester with 3-[(2-hydroxyethyl)amino]-1,2-propanediol, polymer with calcium acrylate and 2-hydroxyethyl acrylate

Acrylic acid, 2-hydroxyethyl ester, polymer with calcium acrylate and diacrylin

Acrylic acid, 2-hydroxyethyl ester, polymer with calcium acrylate and 3-[(2-hydroxyethyl)amino]-1,2-propanediol 1,3-diacrylate

Acrylic acid, 3-(2-hydroxyethoxy)-2-hydroxypropyl ester 3-methacrylate, polymer with calcium acrylate and 2-hydroxyethyl methacrylate

Acrylic acid, calcium salt, polymer with 2-(1,2-dihydroxypropoxy)ethyl methacrylate 1-acrylate and 2-hydroxyethyl methacrylate

Acrylic acid, calcium salt, polymer with 2-(dimethylamino)ethyl methacrylate and 3,3'-(ethylenediimino)-1,2-propanediol 1,1'-diacrylate

Acrylic acid, calcium salt, polymer with 2-hydroxyethyl acrylate and 3-[(2-hydroxyethyl)amino]-1,2-propanediol 1,3-diacrylate

Acrylic acid, calcium salt, polymer with 3,3',3'-[nitrilotris(ethyleneoxy)]tri-1,2-propanediol 1,1',1'-triacylate

**Acrylic acid, calcium salt, polymer with acrylamide and diacrylin**

Acrylic acid, calcium salt, polymer with diacrylin

Acrylic acid, calcium salt, polymer with diacrylin and 2-hydroxyethyl acrylate

Acrylic acid, calcium salt, polymer with diacrylin and 2-hydroxyethyl methacrylate

Acrylic acid, calcium salt, polymer with glycerol dimethacrylate and 2-hydroxyethyl methacrylate

Acrylic acid, diester with glycerol, polymer with acrylamide

Acrylic acid, magnesium salt, polymer with 2-hydroxyethyl methacrylate and 3,6,9,12-tetraoxapentadecane-1,14,15-triol 1,15-diacrylate

Acrylin, di-, polymer with acrylamide

Acrylin, di-, polymer with acrylamide and calcium acrylate

Acrylin, di-, polymer with calcium acrylate

Acrylin, di-, polymer with calcium acrylate and 2-hydroxyethyl acrylate

Acrylin, di-, polymer with calcium acrylate and 2-hydroxyethyl methacrylate

Ethylene glycol, monoacrylate, polymer with calcium acrylate and 3-[(2-hydroxyethyl)amino]-1,2-propanediol 1,3-diacrylate

Ethylene glycol, monoacrylate, polymer with calcium acrylate and diacrylin

Glycerol, diacrylate, polymer with acrylamide

Methacrylic acid, 2-(1,2-dihydroxypropoxy)ethyl ester 1-acrylate, polymer with calcium acrylate and 2-hydroxyethyl methacrylate

Methacrylic acid, 2-(dimethylamino)ethyl ester, polymer with calcium acrylate and 3,3'-(ethylenediimino)di-1,2-propanediol 1,1'-diacrylate

Methacrylic acid, 2-hydroxyethyl ester, polymer with calcium acrylate and diacrylin

Methacrylic acid, 2-hydroxyethyl ester, polymer with calcium acrylate and glycerol dimethacrylate

Methacrylic acid, 2-hydroxyethyl ester, polymer with magnesium acrylate and 3,6,9,12-tetraoxapentadecane-1,14,15-triol 1,15-diacrylate

Methacrylic acid, diester with glycerol, polymer with calcium acrylate and 2-hydroxyethyl methacrylate

RL: USES (Uses)

(soil stabilization with)

IT Methacrylic acid, 2-hydroxyethyl ester, polymer with calcium acrylate and 2-(1,2-dihydroxypropoxy)ethyl methacrylate 1-acrylate

RL: USES (Uses)

(soils stabilization with)

IT 9016-51-7, Acrylic acid, calcium salt, polymers 28390-16-1 28390-17-2



28390-18-3

RL: USES (Uses)

(soil stabilization with)

L65 ANSWER 23 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1968:79172 CAPLUS

DOCUMENT NUMBER: 68:79172

TITLE: Polyacrylamide-base compositions for soil treatment

INVENTOR(S): Shkol'nik, Ya. Sh.; Dombrovskii, A. V.; Shkol'nik, R. S.

SOURCE: U.S.S.R. From: Izobret., Prom. Obraztsy, Tovarnye Znaki 1967, 44(5), 98.

CODEN: URXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Russian

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
SU 192405		19670206	SU	19640701

ED Entered STN: 12 May 1984

AB The comps. are prepared by saponification of acrylonitrile with H<sub>2</sub>SO<sub>4</sub> and neutralization of the saponification products with an aqueous solution of KOH with NH<sub>3</sub>.  
To obtain a complex fertilizer with soil-structure-forming properties, primarily for irrigation agriculture, a mixture of solns. containing microamts. of Mn salts, NH<sub>4</sub> phosphate and molybdate, and H<sub>3</sub>BO<sub>3</sub> is added to a neutralized solution of acrylamide containing sulfates and acrylates of K and NH<sub>4</sub>. After dilution with H<sub>2</sub>O until the complete solution of all the components is achieved, the product is polymerized at 79-80° in the presence of radical initiators.

IC C08F

CC 36 (Plastics Manufacture and Processing)

IT **Fertilizers**  
RL: USES (Uses)  
(acrylamide polymers with acrylic acid salts as soil-conditioning)

IT Soils  
(conditioners for, acrylamide polymers with acrylic acid salts as fertilizing)

IT 79-10-7D, Acrylic acid, salts  
RL: USES (Uses)  
(polymers with acrylamide, for soil-conditioning fertilizes)

IT 79-06-1, Acrylamide  
RL: USES (Uses)  
(polymers with acrylic salts, for soil-conditioning fertilizers)

L65 ANSWER 24 OF 36 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1959:52945 CAPLUS

DOCUMENT NUMBER: 53:52945

ORIGINAL REFERENCE NO.: 53:9547i, 9548a

TITLE: Soil stabilizers against erosion

INVENTOR(S): Weeks, Lloyd E.

PATENT ASSIGNEE(S): Monsanto Chemical Co.

DOCUMENT TYPE: Patent

LANGUAGE: Unavailable

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	DE 950644		19561011	DE 1953-M17530	19530227
ED	Entered STN: 22 Apr 2001				
AB	In order to stabilize the surface of soils against erosion, a mixture of bentonite and 2-100%, preferably 3-50% of a water-soluble anionic polymer is used. The following polymers are suitable: salts of copolymers of vinyl acetate, acrylic acid, or vinyl alkyl ether and maleic acid, salts of hydrolyzed acrylonitrile polymers, and salts of sulfonated hydrocarbon polymers. The mixts. are used as powders or as aqueous dispersions.				
INCL	16; 16				
CC	15 (Soils and Fertilizers)				
IT	Soils (consolidation, bentonite-anionic polymer mixts. for)				
IT	Bentonite (mixts. with anionic polymers, for soil stabilization)				
IT	Ethers (polymers of vinyl with maleic acid, salt, mixts. with bentonite, for soil stabilization)				
IT	Hydrocarbons (polymers of, sulfonated, salts, mixts. with bentonite, for soil stabilization)				
IT	Acrylic acid, polymer with maleic acid salt (mixts. with bentonite, for soil stabilization)				
IT	Maleic acid, polymer with acrylamide, Ag salt, acrylic acid (salts, mixts. with bentonite, for soil stabilization)				
IT	Maleic acid, polymer with acrylamide, Ag salt (with vinyl compds., salts, mixts. with bentonite, for soil stabilization)				
IT	25014-41-9, Acrylonitrile polymers (hydrolyzed, salts, mixts. with bentonite, for soil stabilization)				
IT	24980-59-4, Vinyl acetate, polymer with maleic acid (salts, mixts. with bentonite, for soil stabilization)				
L65	ANSWER 25 OF 36 WPIX COPYRIGHT 2006 THE THOMSON CORP on STN				
AN	2004-821497 [81] WPIX				
DNC	C2004-285551				
TI	Formation of hydrogel involves combining ethylenically-unsaturated monomer, cross-linking agent and an ionic polysaccharide with a cation, followed by polymerization.				
DC	A14 A96 A97 B07 C04 D13 E19				
IN	GUTIERREZ-ROCCA, J; OMIDIAN, H				
PA	(GUTI-I) GUTIERREZ-ROCCA J; (OMID-I) OMIDIAN H; (KOSL-N) KOS LIFE SCI INC				
CYC	109				
PI	WO 2004096127 A2 20041111 (200481)* EN 22				
	RW: AT BE BG BW CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS LU MC MW MZ NL OA PL PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW				
	W: AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NA NI NO NZ				

OM PG PH PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG  
 US UZ VC VN YU ZA ZM ZW  
 US 2004224021 A1 20041111 (200481)  
 EP 1620076 A2 20060201 (200612) EN  
 R: AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PL  
 PT RO SE SI SK TR  
 AU 2004233805 A1 20041111 (200615)  
 ADT WO 2004096127 A2 WO 2004-US11448 20040414; US 2004224021 A1 Provisional US  
 2003-465755P 20030425, US 2004-827841 20040420; EP 1620076 A2 EP  
 2004-750099 20040414, WO 2004-US11448 20040414; AU 2004233805 A1 AU  
 2004-233805 20040414  
 FDT EP 1620076 A2 Based on WO 2004096127; AU 2004233805 A1 Based on WO  
 2004096127  
 PRAI US 2003-465755P 20030425; US 2004-827841 20040420  
 AB WO2004096127 A UPAB: 20041216  
 NOVELTY - Formation of a hydrogel involves combining at least one of  
 ethylenically-unsaturated monomer, a cross-linking agent, and an ionic  
 polysaccharide with at least one cation, followed by polymerization.  
 DETAILED DESCRIPTION - Formation (F1) of a hydrogel (H1) involves:  
 (A) combining at least one ethylenically-unsaturated monomer, a  
 cross-linking agent, and an ionic polysaccharide with at least one cation  
 to form a mixture (M1);  
 (B) subjecting (M1) to polymerization; and  
 (C) reacting the hydrogel or with at least one cation under  
 equilibrating conditions.  
 For step (C) at least one cation is used that was not used in step  
 (A), or if the same mixture of cations is used in steps (A) and (C), the  
 ratio of cations used in the steps is different.  
 An INDEPENDENT CLAIM is included for the dehydration (M2) of (H1)  
 involving subjecting (H1) to lyophilization such that a water/hydrogel  
 weight/weight ratio of from 0.005 - 0.1 is achieved.  
 ACTIVITY - None given.  
 MECHANISM OF ACTION - None given.  
 USE - For the formation of superporous hydrogels (claimed).  
 ADVANTAGE - The superporous hydrogels are highly absorbent while  
 maintaining favorable structural properties including strength, ruggedness  
 and resiliency.  
 Dwg.0/0  
 TECH UPTX: 20041216  
 TECHNOLOGY FOCUS - ORGANIC CHEMISTRY - Preferred Method: (M2) involves  
 displacing water contained in the matrix of (H1) or the superporous  
 hydrogel with a non-aqueous, water-miscible solvent or solvent mixture,  
 and removing the solvent mixture at a pressure of less than 50 Torr and/or  
 by heating. (M2) Additionally comprises freezing (H1) to -10 degreesC with  
 a cooling rate of 3 degreesC per hour; maintaining (H1) at -10 degreesC  
 for 16 - 24 hours; lyophilizing (H1) at -10 degreesC and at less than 0.2  
 Torr for 60 - 80 hours; increasing (H1) to 10 degreesC at a rate of 3  
 degreesC per hour; and maintaining (H1) at 10 degreesC and at less than  
 200 mTorr for at least 12 hours.  
 Preferred Components: The non-aqueous solvent is methanol, ethanol,  
 1-propanol, 2-propanol, tetrahydrofuran, dioxane, formic acid, acetic  
 acid, acetonitrile, nitromethane, acetone or 2-butanone (preferably  
 ethanol).  
 TECHNOLOGY FOCUS - PHARMACEUTICALS - Preferred Components: (M2) comprises  
 at least one of diluent, foam stabilizer, foaming aid, reductant, oxidant  
 and blowing agent. The hydrogel is a superporous hydrogel (preferably  
 medicament, nutritional substance or fertilizer which is in the  
 form of film, sheet, particle, granule, fiber, rod or tube). The  
 superporous hydrogel further comprises a controlled release system.

TECHNOLOGY FOCUS - INORGANIC CHEMISTRY - Preferred Components: In step (A), at least one cation used is monovalent (preferably Na<sup>+</sup>, K<sup>+</sup> or NH<sub>4</sub><sup>+</sup>). In step (C), at least one cation used is divalent (preferably Ca<sup>2+</sup>, Ba<sup>2+</sup>, Mg<sup>2+</sup>, Cu<sup>2+</sup>, Zn<sup>2+</sup>, Mn<sup>2+</sup> or Fe<sup>2+</sup>) or trivalent (preferably Fe<sup>3+</sup>, Al<sup>3+</sup> or Cr<sup>3+</sup>). The other cation used in step (C) is Ce<sup>4+</sup>.

TECHNOLOGY FOCUS - POLYMERS - Preferred Components: The polysaccharide is carboxymethylcellulose, alginate, hyaluronic acid, starch glycolate, carboxymethyl starch, dextran sulfate, pectinate, xanthan, carrageenan or chitosan (preferably sodium carboxymethylcellulose).

The crosslinking agent is N,N'-methylenebisacrylamide, ethylene glycol di(meth)acrylate, poly(ethylene glycol) di(meth)acrylate, trimethylolpropane triacrylate (TMPTA), piperazine diacrylamide, glutaraldehyde, epichlorohydrin or at least one of 1,2-diol structure, functionalized peptide or protein (preferably poly(ethylene glycol) diacrylate).

The ethylenically-unsaturated monomer is acrylamide (AM), N-isopropylacrylamide (NIPAM), 2-hydroxyethyl acrylate (HA), 2-hydroxyethyl methacrylate (HEMA), 2-hydroxypropyl methacrylate (HPMA), N-vinyl pyrrolidone (VP), acrylic acid (AA), sodium/potassium/ammonium salts of acrylic acid, methacrylic acid or its salt, N,N-dimethylaminoethyl acrylate, 2-acrylamido-2-methyl-1-propanesulfonic acid (AMPS), potassium salt of 3-sulfopropyl acrylate (SPAK), potassium salt of 3-sulfopropyl methacrylate (SPMAK) or 2-(acryloyloxyethyl)trimethylammonium methyl sulfate (ATMS) (preferably 2-hydroxyethyl acrylate).

L65 ANSWER 26 OF 36 WPIX COPYRIGHT 2006 THE THOMSON CORP on STN

AN 2004-700588 [69] WPIX

DNC C2004-247805

TI Multifunctional water-retaining nutritious sustained release agent.

DC A97 C04

IN CAI, D; WANG, J; YUAN, K

PA (LUSE-N) LUSE QIDIAN SCI & TECHNOLOGY DEV CO LTD

CYC 1

PI CN 1509606 A 20040707 (200469)\*

ADT CN 1509606 A CN 2002-157926 20021220

PRAI CN 2002-157926 20021220

AB CN 1509606 A UPAB: 20041027

NOVELTY - A slow-releasing multifunctional water-preserving nutritive agent is prepared from the water-preserving material prepared from acrylamide, acrylic acid, deionized water, trigger, cross-linking agent and redox catalyst, the functional material prepared from potassium sulfate, potassium chloride, urea, diamine phosphate, trace-element fertilizer, amino acids, modified RE and adhesive, and the organic material and growth hormone (xanthonic acid, amino acid, etc). Its advantages are high performance and multiple functions.

Dwg.0/0

L65 ANSWER 27 OF 36 WPIX COPYRIGHT 2006 THE THOMSON CORP on STN

AN 2003-679219 [64] WPIX

DNC C2003-185490

TI Stable aqueous plant protectant formulation comprises pesticide, salt (preferably fertilizer) and copolymer of 2-acrylamido-2-methyl-propane-sulfonic acid and macromonomer.

DC A13 A14 A25 A97 C01 C04 C07

IN MEYER, G R; MORSCHHAEUSER, R; ZERRER, R

PA (CLRN) CLARIANT GMBH; (MEYE-I) MEYER G R; (MORS-I) MORSCHHAEUSER R; (ZERR-I) ZERRER R

CYC 40  
 PI WO 2003055305 A1 20030710 (200364)\* GE 26  
 RW: AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LU MC NL PT SE SI  
 SK TR  
 W: BR CA CN ID IL JP KR MX SG US  
 DE 10163887 A1 20030710 (200364)  
 EP 1460895 A1 20040929 (200463) GE  
 R: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LI LT LU LV MC  
 MK NL PT RO SE SI SK TR  
 BR 2002015298 A 20041221 (200509)  
 US 2005085391 A1 20050421 (200531)  
 MX 2004006130 A1 20041201 (200561)  
 ADT WO 2003055305 A1 WO 2002-EP14366 20021217; DE 10163887 A1 DE 2001-10163887  
 20011222; EP 1460895 A1 EP 2002-796652 20021217, WO 2002-EP14366 20021217;  
 BR 2002015298 A BR 2002-15298 20021217, WO 2002-EP14366 20021217; US  
 2005085391 A1 WO 2002-EP14366 20021217, US 2004-500025 20041223; MX  
 2004006130 A1 WO 2002-EP14366 20021217, MX 2004-6130 20040621  
 FDT EP 1460895 A1 Based on WO 2003055305; BR 2002015298 A Based on WO  
 2003055305; MX 2004006130 A1 Based on WO 2003055305  
 PRAI DE 2001-10163887 20011222  
 AB WO2003055305 A UPAB: 20031006  
 NOVELTY - Aqueous plant protectant formulation (I) contains:  
 (A) at least one polymer obtained by radically copolymerizing:  
 (a) 2-acrylamido-2-methylpropane-sulfonic acid (AMPS) and/or its  
 salts and  
 (b) at least one macromonomer containing a polymerizable terminal  
 group and a hydrophobic part;  
 (B) at least one pesticide, and  
 (C) at least one agricultural salt.  
 DETAILED DESCRIPTION - Aqueous plant protectant formulation (I)  
 contains:  
 (A) at least one polymer obtained by radically copolymerizing:  
 (a) acrylamidopropylmethylenesulfonic acid (AMPS) and/or its salts;  
 (b) at least one macromonomer containing a polymerizable terminal  
 group providing at least partial solubilization in the reaction medium, a  
 hydrophobic part comprising H or 1-100C (un)saturated aliphatic,  
 cycloaliphatic or aromatic hydrocarbyl and optionally a hydrophilic part  
 based on polyalkylene oxides; and  
 (c) optionally at least one mono- or poly-ethylenically unsaturated  
 comonomer containing O, N, S, P, Cl and/or F;  
 (B) at least one pesticide, and  
 (C) at least one agricultural salt.  
 USE - (I) are useful as broad-spectrum plant protectant formulations,  
 containing both a water-soluble pesticide (B) (e.g. a herbicide,  
 insecticide, fungicide, acaricide, bactericide, molluscicide, nematocide  
 or rodenticide) and a salt (C) (specifically a fertilizer). (I) Is  
 especially a soluble liquid or soluble concentrate (both claimed).  
 ADVANTAGE - Inclusion of the polymers (A) improves the compatibility  
 and solubility of the pesticides (B) and salts (C), minimizes salting-out  
 effects and provides formulations with excellent storage stability.  
 Dwg.0/0  
 TECH UPTX: 20031006  
 TECHNOLOGY FOCUS - POLYMERS - Preferred Monomers: (a) Comprises the sodium  
 and/or ammonium salt of AMPS. (b) Is of formula R1-Y-(R2-O)x-(R4-O)z-R3  
 (II).  
 R1 = vinyl, allyl, (meth)acryloyl, seneciroyl or crotonyl (especially  
 (meth)acryloyl);  
 R2, R4 = 2-4C (especially 2-3C) alkylene;  
 x, z = 0-500 (especially 0-50), preferably not both 0;  
 Y = O, S, PH or NH (especially O), and

R3 = H or 1-100C (preferably 1-30C) (un)saturated aliphatic, cycloaliphatic or aromatic hydrocarbyl (preferably 4-22C alkyl or alkenyl, phenyl, mono- or poly-(1-22C) alkylphenyl or polystyrylphenyl, especially 2,4,6-tris-(sec. butyl)-phenyl or 2,4,6-tris-(1-phenylethyl)-phenyl).

(II) is especially a (meth)**acrylate** ester of an optionally oxyethylenated alcohol of formula HO-(CH<sub>2</sub>CH<sub>2</sub>O)<sub>y</sub>-R31 (II').

y = 0-50 (preferably 1-50, especially 5-30), and

R31 = 10-22C alkyl or poly-(1-22C) alkylphenyl or polystyrylphenyl, especially 2,4,6-tris-(sec. butyl)-phenyl or 2,4,6-tris-(1-phenylethyl)-phenyl.

(c) Comprises (meth)**acrylamide**, vinyl formamide, N-vinylmethacrylamide, sodium methallylsulfonate, hydroxyethyl methacrylate, (meth)**acrylic acid**, maleic anhydride, vinyl acetate, N-vinylpyrrolidone, vinylphosphonic acid, styrene, styrenesulfonic acid (or its sodium salt), tert. butyl **acrylate** or methyl methacrylate.

Preferred Polymers: The content of (b) units in (A) is 50.1-99.9 (preferably 80-94) wt.%, or alternatively 0.1-50 (preferably 6-20) wt. %. (A) Has a number average molecular weight of 1000-20000000 (especially 50000-1500000), and is optionally crosslinked. (A) Is obtained by precipitation copolymerization, preferably in tert. butanol.

TECHNOLOGY FOCUS - AGRICULTURE - Preferred Composition: The pesticide (B) has a water-solubility of more than 800 g/l (especially more than 100 g/l) and is preferably ionogenic, glyphosate, sulphosinate and/or glufosinate being especially preferred. The salts (C) are inorganic **fertilizers**, preferably ammonium salts and/or phosphates. (I) contains (by weight) 0.01-10 (especially 0.01-5)% (A), 5-85 (especially 25-60)% (B), 5-85 (especially 25-60)% (C) and 5-60 (especially 5-30)% water, and is free of organic solvents.

L65 ANSWER 28 OF 36 WPIX COPYRIGHT 2006 THE THOMSON CORP on STN  
 AN 2003-267863 [26] WPIX  
 DNN N2003-213027 DNC C2003-069742  
 TI Particulate, black earth-like, water-absorbing and swellable solid, useful e.g. as soil improver, fertilizer carrier or animal litter, comprises ground minerals bonded by crosslinked polymeric sponge.  
 DC A13 A14 A97 C04 P13  
 IN FABRITZ, G; PEPPMOLLER, R; GERHARD, W; LINMAR, A; PEPPMOELLER, R  
 PA (FABR-I) FABRITZ G; (PEPP-I) PEPPMOLLER R; (LINM-I) LINMAR A; (PEPP-I) PEPPMOELLER R  
 CYC 34  
 PI WO 2003000621 A1 20030103 (200326)\* GE 20  
 RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR  
 W: AE AU BR CA CN HU IL IN JP MX PL RU TR US ZA  
 DE 10130427 A1 20030327 (200329)  
 EP 1399397 A1 20040324 (200421) GE  
 R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR  
 US 2004132869 A1 20040708 (200445)  
 AU 2002320872 A1 20030108 (200461)  
 JP 2005500407 W 20050106 (200505) 32  
 CN 1633400 A 20050629 (200574)  
 ADT WO 2003000621 A1 WO 2002-DE2159 20020613; DE 10130427 A1 DE 2001-10130427 20010623; EP 1399397 A1 EP 2002-754198 20020613, WO 2002-DE2159 20020613; US 2004132869 A1 WO 2002-DE2159 20020613, US 2004-482255 20040226; AU 2002320872 A1 AU 2002-320872 20020613; JP 2005500407 W WO 2002-DE2159 20020613, JP 2003-506829 20020613; CN 1633400 A CN 2002-816456 20020613  
 FDT EP 1399397 A1 Based on WO 2003000621; AU 2002320872 A1 Based on WO 2003000621; JP 2005500407 W Based on WO 2003000621  
 PRAI DE 2001-10130427 20010623

AB WO2003000621 A UPAB: 20031203

NOVELTY - Particulate, black earth-like, water-absorbing and swellable solid, comprises ground minerals acting as plant nutrients, auxiliaries and bulking agents (optionally together with additives), at more than 30 weight% combined. It is bonded by a crosslinked polymeric sponge, which absorbs up water and aqueous liquids to form a hydrogel and additionally contains water-soluble alkali metal silicate.

DETAILED DESCRIPTION - A new particulate, black earth-like, water-absorbing and swellable solid (A), comprises ground minerals acting as plant nutrients (I), auxiliaries (II) and bulking agents (III) (optionally together with solid and/or liquid additives), contains at least 30 weight % (I)-(III), and is bonded by a crosslinked polymeric sponge (IV) which takes up water and aqueous liquids to form a hydrogel and additionally contains water-soluble alkali metal silicate (V).

An INDEPENDENT CLAIM is included for the preparation of (A).

USE - (A) may be used:

(1) for the uptake of alkaline and/or ammoniacal liquids and for treating compositions obtained by the bacterial decomposition of organic materials (e.g. manure);

(2) as water reservoir and nutrient source for the growth, germination and culture of plants (where (I) is used alone or as a soil improving additive for mixing with natural soil) (where (I) has a neutralization degree of 1-40 mol. %);

(3) as a carrier for solid or liquid fertilizers;

(4) for greening slopes (where (I) is embedded in natural or synthetic textile sheets such as mats or non-wovens);

(5) for greening roofs;

(6) for growing plants (such as rice) in wet environments such as at least partially flooded fields (where (I) is embedded, together with buoyant natural material or plastics, in natural or synthetic textile sheets such as mats or non-wovens);

(7) as carrier for insecticides, pesticides, bactericides or fungicides;

(8) as carrier for dust-forming, finely or extremely finely divided mineral, biological/natural or synthetic solid particles, e.g. under-sized fractions of ground polymers; or

(9) for the production of dust filters.

In particular (I) is used in agricultural applications or as an animal litter.

ADVANTAGE - The superabsorbing polymer based products (A) have controllable properties and a wide range of applications in agriculture and other sectors. Typically they can be used as agrochemical active agent carriers which also provide synergizing, water-retaining and plant nutritional effects.

Dwg.0/0

TECH UPTX: 20031203

TECHNOLOGY FOCUS - AGRICULTURE - Preferred Materials: The plant nutrients (I) are mainly or entirely finely ground eruptive rock, specifically basic igneous rock with a calculated SiO<sub>2</sub> content of less than 50 wt.% or acidic igneous rock with a calculated SiO<sub>2</sub> content of more than 50 wt.%. In particular (I) is lava, tuff and/or diabase of particle size less than 200 (especially less than 100) microm. The auxiliaries (II) consist of minerals which react with acidic monomers to form carbon dioxide and purge oxygen from the monomer solution, selected from conversion products of chalk, dolomite, trass or magnesite; and minerals acting as thickeners, sponge stabilizers, cation scavengers, polymerization retarders and swelling accelerators, selected from water-soluble clay minerals such as bentonite. The bulking agents (III) are minerals such as feldspar or quartz sand. The solid additives are selected from algae, bast, lignite, hemp, wood, castor oil plant clippings, coal, straw, peat or

water-insoluble, water-swellaable polymers. The alkali metal silicate (V) consists mainly or entirely of potassium silicate, as obtained by alkali fusion of quartz sand. The solid (A) optionally also contains at least one solid or liquid **fertilizer** containing potassium, nitrogen, phosphorus or silicon.

TECHNOLOGY FOCUS - POLYMERS - Preferred Polymers: The polymeric sponge (IV) is obtained from (wt.%):

- (1) water-soluble ethylenically unsaturated monomer(s) containing acid groups (a; 55-99.9),
- (2) water-soluble ethylenically unsaturated monomer(s) (b; 0-40),
- (3) crosslinker(s) (c; 0.01-5) and
- (4) water-soluble polymer (d; 0-30).

Monomer (a) is preferably (meth)acrylic, ethacrylic, crotonic, sorbic, maleic, fumaric, itaconic, 2-methacryloyloxy-ethanesulfonic, 4-vinyl-benzenesulfonic, allylsulfonic, vinyltoluene-sulfonic, vinylphosphonic or vinylbenzene-phosphonic acid or a (meth)acrylamido-alkanesulfonic acid (e.g. 2-acrylamido-2-methyl-propanesulfonic acid) (especially (meth)acrylic and/or maleic acid); and is preferably mainly or entirely in potassium salt form. Monomer (b) is (meth)**acrylamide** (or its N-alkyl, N-dimethylaminoalkyl or N-methylol derivative), N-vinylformamide, N-vinyl-N-methylformamide, N-vinylacetamide, N-vinyl-N-methylacetamide, vinylpyrrolidone, a hydroxyalkyl (meth)**acrylate** (e.g. hydroxyethyl **acrylate**), a polyethylene glycol monoallyl ether (meth)**acrylate** ester or a polyethylene glycol allyl ether.

Preparation (claimed): Preparation of (A) involves:

- (1) providing (I)-(III) and other non-polymerizable components as an aqueous slurry containing alkali(ne earth) metal carbonate and/or carbon dioxide and optionally an oxidizing catalyst (to inhibit caking);
- (2) adding the (IV)-forming monomers to the slurry to cause reaction with release of carbon dioxide;
- (3) when foaming is complete carrying out polymerization; and
- (4) cutting up the polymer block and comminuting using a chopper or mincer to give 'crumbs'.

Preferably the slurry formed in the first step contains dissolved acid-neutralizing alkali(ne earth) metal compound (especially alkali metal hydroxide, carbonate or silicate) in an amount neutralizing at most 40 mol.% of the acid monomer (a), and optionally further alkali contained in hydrophilic and/or porous, surface-encapsulated solid.

L65 ANSWER 29 OF 36 WPIX COPYRIGHT 2006 THE THOMSON CORP on STN

AN 2004-030579 [03] WPIX

CR 2004-190197 [18]

DNC C2004-010103

TI Containment of wastewater in defined containment area by allowing superabsorbent polymer and wastewater to interact until all of wastewater is absorbed by superabsorbent polymer.

DC A14 A97 C04 D15

IN PRICE, E G; ROACH, G W

PA (DEWA-N) DEWATER SOLUTIONS INC

CYC 1

PI US 6623645 B1 20030923 (200403)\* 9

ADT US 6623645 B1 US 2000-697855 20001027

PRAI US 2000-697855 20001027

AB US 6623645 B UPAB: 20040316

NOVELTY - Wastewater is contained in a defined containment area by allowing a superabsorbent polymer (21) and the wastewater to interact until all of the wastewater is absorbed by the superabsorbent polymer, preventing the wastewater from leaving the defined containment area and



entering adjacent aquifers and surface waters.

DETAILED DESCRIPTION - Containment of wastewater in a defined containment area comprises:

(1) contacting the wastewater with a superabsorbent polymer in the defined containment area;

(2) allowing the superabsorbent polymer and the wastewater to interact until all of the wastewater is absorbed by the superabsorbent polymer, preventing the wastewater from leaving the defined containment area and entering adjacent aquifers and surface waters;

(3) evaporating the water from the superabsorbent polymer to produce a dry polymer composition; and

(4) disposing of the dry polymer composition.

USE - The invention is for containment of wastewater (e.g. animal wastes or wastewater from an animal rearing facility and food processing wastes) in a defined containment area or for treatment of wastewater, for producing a fertilizer and for controlling odor caused by ammonia in wastewaters (claimed). Wastewater can also be runoff from mining operations, radioactive wastes, hazardous wastes or industrial wastes from manufacturing operations.

ADVANTAGE - The invention achieves economic and efficient containment and treatment of wastewater and management of byproducts of the treatment methods.

DESCRIPTION OF DRAWING(S) - The figure is a cross-sectional view of a cool air generating apparatus used, when evaporating the water from superabsorbent polymer.

Floor 11

Walls 12

Holes 16

Space 19

Superabsorbent polymer 21

Dwg.2/3

TECH

UPTX: 20040112

TECHNOLOGY FOCUS - POLYMERS - Preferred Material: The superabsorbent polymer is an organic cross-linked **acrylamide acrylic acid** copolymer.

Preferred Parameter: The superabsorbent polymer is added to the wastewater in 2-200 or 1-30 g/l of wastewater.

Preferred Method: Evaporation of the water is facilitated by the use of a fan. The dry polymer composition is disposed of by using the composition as a **fertilizer**. The wastewater and the superabsorbent polymer are separated during the contacting step by a selective membrane that allows water to pass through the membrane but does not allow biological agents to pass through the membrane.

L65 ANSWER 30 OF 36 WPIX COPYRIGHT 2006 THE THOMSON CORP on STN

AN 2004-046950 [05] WPIX

DNN N2004-038255 DNC C2004-019507

TI Soil composition used for afforestation and greening, comprises soil containing silt and clay, and water absorbing resin having preset water absorption multiplying factor.

DC A14 A97 C04 P13

PA (JAPC) NIPPON SHOKUBAI CO LTD

CYC 1

PI JP 2003292957 A 20031015 (200405)\* 3

ADT JP 2003292957 A JP 2002-104155 20020405

PRAI JP 2002-104155 20020405

AB JP2003292957 A UPAB: 20040120

NOVELTY - A soil composition comprises soil (A) having 50-98 weight% of total of silt and clay. The content of organic substance in soil, is 2 weight% or less. The composition contains a water-absorbing resin (B) which carries

out polymerization and cross-linking of a polymerizable monomer containing 1 or 2 types of monomer chosen from (meth)acrylic acid, salt of (meth)acrylic acid and (meth)acrylamide.

DETAILED DESCRIPTION - A soil composition comprises soil (A) having 50-98 weight% of total of silt and clay. The content of organic substance in soil, is 2 weight% or less. The composition contains a water-absorbing resin (B) having water absorption multiplying factor of 10-500 g/g of deionized water. The water absorbing resin carries out polymerization and cross-linking of a polymerizable monomer containing 1 or 2 types of monomer chosen from (meth)acrylic acid, salt of (meth)acrylic acid and (meth)acrylamide.

ACTIVITY - Fertilizer.

MECHANISM OF ACTION - None given.

USE - For afforestation and greening.

ADVANTAGE - The soil composition has favorable capacity to absorb the water supplied by rainfall and irrigation. The soil composition maintains favorable quantity of water to plant. The water absorbing resin contained in composition, raises favorable dilation during absorption of water. An environment suitable for growth of plant, is attained with soil composition having moderate space gaps.

Dwg.0/0

TECH

UPTX: 20040120

TECHNOLOGY FOCUS - POLYMERS - Preferred Composition: The soil composition contains 0.05-0.5 weight parts of water-absorbing resin, with respect to 100 weight parts of soil (A).

Preferred Property: The mean particle diameter (microm) of water-absorbing resin (B) is 5-100 times the mean particle diameter (microm) of soil having 5% or less of moisture content.

L65 ANSWER 31 OF 36 WPIX COPYRIGHT 2006 THE THOMSON CORP on STN

AN 2003-883644 [82] WPIX

DNN N2003-705196 DNC C2003-251538

TI Molding for greening of roof of building, is formed from mixture of artificial lightweight soil, resin-based binder, and cross-linked polymer obtained using non-ionic (meth)acrylate type monomer and (meth)acrylic acid (salt).

DC A14 A21 A32 A97 C04 P13

PA (MITR) MITSUBISHI RAYON CO LTD

CYC 1

PI JP 2003245013 A 20030902 (200382)\* 5

ADT JP 2003245013 A JP 2002-46155 20020222

PRAI JP 2002-46155 20020222

AB JP2003245013 A UPAB: 20031223

NOVELTY - Molding for greening of roof of building is formed from mixture containing water retention agent and artificial lightweight soil. The water retention agent is mixed with lightweight soil using resin-based binder. The water retention agent consists of cross-linked polymer obtained using 50-100 mass parts of non-ionic (meth)acrylate type monomer or non-ionic (meth)acrylamide type monomer, and 0-50 mass parts of (meth)acrylic acid (salt).

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for greening method which involves installing the molding in required region, and growing plants.

USE - For greening of roof of building, wall surface and side strip of road.

ADVANTAGE - The lightweight molding with excellent water retention property, is provided economically. The greening of wall surface and roof of building, is carried out favorably. The appearance of the wall surface and building is improved.

Dwg.0/0

TECH UPTX: 20031223  
 TECHNOLOGY FOCUS - POLYMERS - Preferred Composition: The water retention agent contains cross-linkable polymer containing 0.01-5 mass parts of cross-linkable monomers, 60-80 mass parts of (meth)acrylamide and 20-40 mass parts of (meth)acrylic acid (salt) which is neutralized with 5-15 mol.% alkali and converted into alkali metal salt. The artificial lightweight soil is perlite, vermiculite, thermoplastic resin foam and/or peat-moss. The resin-based binder is acrylic group resin. The molding further contains a slow-release fertilizer such as urea group resin.

L65 ANSWER 32 OF 36 WPIX COPYRIGHT 2006 THE THOMSON CORP on STN  
 AN 2003-394043 [38] WPIX  
 DNC C2003-104744  
 TI Process for preparing high hygroscopic composite resin for agricultural purpose e.g. improving soil, preserving water and coating seeds.  
 DC A97 C04  
 IN LI, Z; PAN, Z; SUN, K  
 PA (CHAN-N) CHANGCHUN APPLIED CHEM INST CHINESE ACAD  
 CYC 1  
 PI CN 1359974 A 20020724 (200338)\*  
 CN 1160407 C 20040804 (200612)  
 ADT CN 1359974 A CN 2001-143497 20011229; CN 1160407 C CN 2001-143497 20011229  
 PRAI CN 2001-143497 20011229  
 AB CN 1359974 A UPAB: 20030616  
 NOVELTY - Process for preparing high hygroscopic composite resin for agricultural purposes comprises reacting acrylamide, potassium acrylate, ammonium (or potassium) persulfate, potassium (or sodium) hydrogen metabisulfite, N,N'-methylene diacrylamide, triethanolamine, and kaolin and bentone as composite additive by a free radical-aqueous solution copolymerization process.  
 DETAILED DESCRIPTION - Process for preparing high hygroscopic composite resin (P(AM-KAA)KB) for agricultural purposes comprises reacting acrylamide, potassium acrylate, ammonium (or potassium) persulfate as oxidant, potassium (or sodium) hydrogen metabisulfite as reducer, N,N'-methylene diacrylamide as cross-linking agent, triethanolamine as promoter, and kaolin and bentone as composite additive by a free radical-aqueous solution copolymerization process.  
 ACTIVITY - Fertilizer.  
 MECHANISM OF ACTION - None given.  
 USE - For preparing high-hygroscopicity composite resin for improving soil, preserving water and coating seeds.  
 Dwg.0/0

L65 ANSWER 33 OF 36 WPIX COPYRIGHT 2006 THE THOMSON CORP on STN  
 AN 2002-064321 [09] WPIX  
 DNC C2002-018801  
 TI Soil conditioner for conditioning soil, especially arable soil, comprises dispersion liquid in aqueous medium of anionic water soluble polymer, co-existing with ionic polymer dispersing agent.  
 DC A93 A97 C04  
 PA (HYMO-N) HYMO CORP  
 CYC 1  
 PI JP 2001254077 A 20010918 (200209)\* 5  
 ADT JP 2001254077 A JP 2000-66353 20000310  
 PRAI JP 2000-66353 20000310  
 AB JP2001254077 A UPAB: 20020208  
 NOVELTY - A soil conditioner comprises a dispersion liquid in an aqueous medium of anionic water soluble polymer co-existing with ionic polymer

dispersing agent.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a method of improving soil, which involves spraying the soil conditioner in arable soil.

ACTIVITY - Fertilizer.

MECHANISM OF ACTION - None given.

USE - For conditioning soil, especially arable soil.

ADVANTAGE - The soil conditioner provides excellent soil conditioning effect and is easy to handle.

Dwg.0/0

TECH

UPTX: 20020208

TECHNOLOGY FOCUS - POLYMERS - Preferred Polymer: The anionic water soluble polymer is copolymer of monomer containing (meth)acrylic acid. The anionic water soluble polymer consists of polymer-dispersed liquid which is obtained by dispersion polymerization of 5-100 mol % of (meth)acrylic acid and 0-95 mol % of acrylamide monomer mixture in salt solution co-existing with ionic polymer dispersing agent. The ionic polymer dispersing agent is a cationic polymer.

Preferred Properties: The ionic equivalent of ionic dispersing agent is 1.5-15 meq/g.

Preferred Components: The soil conditioner further contains a fertilizer component.

TECHNOLOGY FOCUS - AGRICULTURE - Preferred Method: The soil condition is added on plant cultivation base, when used in slope areas.

L65 ANSWER 34 OF 36 WPIX COPYRIGHT 2006 THE THOMSON CORP on STN

AN 2000-505780 [45] WPIX

DNC C2000-151768

TI Applying compositions to protect plants by reducing threshold temperature at which frost and/or freeze damage occurs by coating plants with compositions comprising heat-releasing polymer.

DC A14 A97 C04 C07 P13

IN BLUM, R D

PA (EGGF-N) EGG FACTORY LLC; (AGRO-N) AGROSHIELD LLC

CYC 91

PI WO 2000042843 A1 20000727 (200045)\* EN 27

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL  
OA PT SD SE SL SZ TZ UG ZW

W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES  
FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS  
LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL  
TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

AU 2000025029 A 20000807 (200055)

US 6180562 B1 20010130 (200108)

EP 1148781 A1 20011031 (200172) EN

R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT  
RO SE SI

BR 2000007625 A 20011106 (200175)

JP 2002534967 W 20021022 (200301) 27

AU 758412 B 20030320 (200329)

ADT WO 2000042843 A1 WO 2000-US733 20000113; AU 2000025029 A AU 2000-25029

20000113; US 6180562 B1 US 1999-233056 19990120; EP 1148781 A1 EP

2000-903254 20000113; WO 2000-US733 20000113; BR 2000007625 A BR 2000-7625

20000113; WO 2000-US733 20000113; JP 2002534967 W JP 2000-594317 20000113,

WO 2000-US733 20000113; AU 758412 B AU 2000-25029 20000113

FDT AU 2000025029 A Based on WO 2000042843; EP 1148781 A1 Based on WO

2000042843; BR 2000007625 A Based on WO 2000042843; JP 2002534967 W Based on WO 2000042843; AU 758412 B Previous Publ. AU 2000025029, Based on WO

2000042843

PRAI US 1999-233056 19990120  
AB WO 200042843 A UPAB: 20040408

NOVELTY - Method of applying a composition to plants comprises coating at least a portion of the surface of the plants with compositions comprising a polymer that releases heat over a range of dropping ambient temperatures beginning about 32 deg. F.

ACTIVITY - Plant protectant.

MECHANISM OF ACTION - Anti-frost; anti-freeze.

USE - The method is used to protect plants by reducing the threshold temperature at which frost and/or freeze damage will occur. The compositions may be used on any conventional crop for human and/or animal consumption such as fruits, vegetables, grass and hay, on ornamentals (e.g. flowers and shrubs), in forestation development, erosion protection and diverse industrial applications. They may be used to protect both immature and mature plants as well as severed plant (parts) which are still subject to possible frost and/or freeze damage.

ADVANTAGE - The method provides protection to the plants over a broader range of ambient temperatures and provides an insulating layer that helps retain the heat within the plant structure thus providing greater protection to the plant. The applied compositions may also depress the freezing point of water that might condense and/or collect on plant surfaces after their application. The compositions will provide frost protection for several days before losing some efficacy due to dehydration caused by evaporation of water molecules associated with the polymers, but will still maintain their integrity as coatings, thus providing insulating protection to the plant, despite gradually losing their ability to release heat upon encountering freezing conditions. Their ability to release heat upon encountering freezing conditions may be regenerated by remoisturizing them, e.g. by exposure to humid conditions, particularly rain, or irrigation.

Dwg.0/1

TECH UPTX: 20000918

TECHNOLOGY FOCUS - AGRICULTURE - Preferred Composition: The polymer is a hydrated polymer gel. The compositions comprise an aqueous solution of the hydrated polymer gel. The compositions comprise water droplets coated with the hydrated polymer gel. The compositions comprise foam, preferably further comprising air bubbles with a diameter of 10-100 microns. The hydrated polymer gel is a hydrated copolymer gel. The hydrated polymer gel is formed by hydrolyzing a polymer. The hydrated polymer gel is hydrolyzed polyacrylonitrile, preferably comprising **acrylic acid** and **acrylamide** groups, especially that is uncrosslinked.

Alternatively the hydrated polymer gel is a hydrolyzed fibrous protein, preferably comprising amino acid and **acrylamide** groups, especially hydrolyzed fibronectin, fibrin or elastin. The compositions further comprise micronutrients, macronutrients, pesticides, insecticides, herbicides, rodenticides, fungicides, biocides, plant-growth regulators, **fertilizers**, microbes, soil additives, adhesion-promoting agents, surfactants and freezing-point modifiers.

Preferred Method: The range of dropping ambient temperatures is 32-27 degreesF. A composition comprising water droplets coated with the hydrated polymer gel is applied followed by a composition comprising an aqueous solution of the hydrated polymer gel. The compositions are applied by spraying.

TECHNOLOGY FOCUS - POLYMERS - Preferred Composition: The hydrated polymer gel is hydrolyzed polyacrylonitrile, preferably comprising **acrylic acid** and **acrylamide** groups, especially that is uncrosslinked. Alternatively the hydrated polymer gel is a hydrolyzed fibrous protein, preferably comprising amino acid and **acrylamide**

groups, especially hydrolyzed fibronectin, fibrin or elastin.

L65 ANSWER 35 OF 36 WPIX COPYRIGHT 2006 THE THOMSON CORP on STN  
 AN 1999-456614 [38] WPIX  
 DNN N1999-341391 DNC C1999-133949  
 TI Medium used to improve the availability of water and nutrients to e.g. floral and ornamental nursery and vegetable stock and seedlings.  
 DC A97 C04 P13  
 IN MILLER, D L; MILLER, J C  
 PA (MILL-I) MILLER D L; (MILL-I) MILLER J C  
 CYC 1  
 PI US 5927003 A 19990727 (199938)\* 29  
 ADT US 5927003 A CIP of US 1994-222796 19940405, US 1995-393807 19950224  
 FDT US 5927003 A CIP of US 5514191  
 PRAI US 1995-393807 19950224; US 1994-222796 19940405  
 AB US 5927003 A UPAB: 19990922  
 NOVELTY - Medium for enhancing the growth of seedling transplants and availability of water and nutrients comprising a support material, and a linear water soluble polymer capable of forming a water retaining network with the support material.  
 DETAILED DESCRIPTION - Medium for enhancing the growth of seedling transplants and availability of water and nutrients comprising:  
 (a) a support material selected from peat, moss, compost, reclaimed compost, vermiculite, bark, synthetic sponges, and/or perlite; and dispersed within it  
 (b) a polymer capable of forming a water retaining network with the support material.  
 An INDEPENDENT CLAIM is also included for a method of promoting the development of seedling transplants, comprising:  
 (i) providing a support material as above;  
 (ii) dispersing within it a polymer as above;  
 (iii) applying water and seeds, such that water and nutrients are absorbed by the polymer and the support media and a made more available for plant seedling growth; and  
 (iv) germinating the seeds into seedling transplants.  
 USE - The medium is used to improve the availability of water and nutrients to e.g. floral and ornamental nursery and vegetable stock and seedlings, e.g. peppers, tomatoes, celery, lettuce, cauliflower and broccoli. The medium is especially useful in the production of mushrooms.  
 ADVANTAGE - The medium gives water and nutrient management, reduced cycle times, and increased crop yields.  
 Dwg.0/19

TECH UPTX: 19990922  
 TECHNOLOGY FOCUS - POLYMERS - Preferred Polymer: The polymer contains at least one monomer selected from **acrylic acid**, methacrylic acid, maleic anhydride, and their carboxy functional equivalents, and **acrylamide**. The polymer may be a copolymer of at least two of the monomers, or a homopolymer of **acrylamide**. The polymer is present in amount 0.1-5.0 (preferably 0.5-2.0) wt. %. The polymer is dissolved in water and added to a pre-moistened support material.  
 TECHNOLOGY FOCUS - AGRICULTURE - Preferred Support Material: The material comprises 1:1 peatmoss/vermiculite. The medium may further contain a **fertilizer** and/or a growth-enhancing nutrient.

L65 ANSWER 36 OF 36 WPIX COPYRIGHT 2006 THE THOMSON CORP on STN  
 AN 1989-302080 [42] WPIX  
 DNC C1989-133555

TI Slow release fertiliser granules coated with copolymer - containing ethylene, vinyl chloride and functional monomer units, providing long term nutrient release in water.

DC A97 C04

IN KODAMA, K; MAHARA, A; SHIMOOKA, T

PA (SUMO) SUMITOMO CHEM IND KK; (SUMO) SUMITOMO CHEM CO LTD

CYC 10

PI EP 337298 A 19891018 (198942)\* EN 8

R: BE CH DE ES FR GB IT NL

JP 02030690 A 19900201 (199011)

US 5133797 A 19920728 (199233) 5

EP 337298 B1 19930707 (199327) EN 8

R: BE DE ES FR GB IT NL

DE 68907432 E 19930812 (199333)

JP 2824272 B2 19981111 (199850) 5

ADT EP 337298 A EP 1989-106072 19890406; JP 02030690 A JP 1989-86108 19890404;

US 5133797 A US 1989-333909 19890406; EP 337298 B1 EP 1989-106072

19890406; DE 68907432 E DE 1989-607432 19890406, EP 1989-106072 19890406;

JP 2824272 B2 JP 1989-86108 19890404

FDT DE 68907432 E Based on EP 337298; JP 2824272 B2 Previous Publ. JP 02030690

PRAI JP 1988-85674 19880406; JP 1989-86108 19890404

AB EP 337298 A UPAB: 19930923

Compsn. comprises fertiliser granules each coated with a copolymer containing units of vinyl chloride (VC) and ethylene (E) in weight ratio. 50:50 to 90:10, plus units of at least one functional monomer (A) at not over 10 weight% on total VC plus E units. The coating is 5-40 weight% based on the granules. (A) is (meth)acrylamide, N-(methylol or butoxymethyl) acrylamide; acrylic acid; glycidyl methacrylate or hydroxyethyl acrylate.

Before coating, the granules have particle size 2-10mm and contain at least one of urea; NH<sub>4</sub> or K chloride, sulphate or nitrate, NaNO<sub>3</sub>; NH<sub>4</sub>, K or Ca phosphate.

USE/ADVANTAGE - The coated prods. have slow release properties, so provide fertiliser over a long period to water, especially in rice cultures. Coating with this copolymer can be done without any blocking (contrast coating with known polymeric resins.).

0/0

L66 ANSWER 1 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 1

ACCESSION NUMBER: 1997:207662 CAPLUS

DOCUMENT NUMBER: 126:200246

TITLE: Solid polymeric products and their use in soil conditioners and ore pelletizing aids

INVENTOR(S): Rose, Simon Alexander Hanson; Chamberlain, Peter

PATENT ASSIGNEE(S): Allied Colloids Limited, UK; Rose, Simon Alexander Hanson; Chamberlain, Peter

SOURCE: PCT Int. Appl., 19 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9703111	A2	19970130	WO 1996-GB1638	19960708
WO 9703111	A3	19970320		

W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG

RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA

AU 9663660 A1 19970210 AU 1996-63660 19960708

ZA 9605952 A 19970714 ZA 1996-5952 19960712

PRIORITY APPLN. INFO.: GB 1995-14283 A 19950713

WO 1996-GB1638 W 19960708

AB Blocks are made of a blend of particles of water-swellaable or water-soluble polymeric material dispersed in a matrix of water-swellaable or water-soluble bonding agent such as polyethylene glycol matrix, including water-activatable effervescent agent and/or is foamed. Acrylamide-Na acrylate copolymer (I) bead fines were mixed with NaHCO<sub>3</sub> powder and citric acid powder and a binder of molten polyethylene glycol to form an agglomerate that was further granulized; the granules were activated (effervesced to release I into solution) when placed in water.

L66 ANSWER 2 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1997:248003 CAPLUS

DOCUMENT NUMBER: 126:224722

TITLE: Sustained release of agrochemicals by way of irrigation water

INVENTOR(S): Rose, Simon Alexander Hanson; Chamberlain, Peter

PATENT ASSIGNEE(S): Allied Colloids Limited, UK; Rose, Simon Alexander Hanson; Chamberlain, Peter

SOURCE: PCT Int. Appl., 27 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9707675	A1	19970306	WO 1996-GB2074	19960823
W:	AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM			
CA 2227926	AA	19970306	CA 1996-2227926	19960823
AU 9668289	A1	19970319	AU 1996-68289	19960823
AU 707743	B2	19990715		
EP 852462	A1	19980715	EP 1996-928562	19960823
R:	ES, FR, GR, IT, PT			
ZA 9607288	A	19970828	ZA 1996-7288	19960828
PRIORITY APPLN. INFO.:			GB 1995-17708	A 19950831
			WO 1996-GB2074	W 19960823

AB Sustained release of an agrochem., selected from trace elements, chelates and pesticides, is achieved by contacting irrigation water with a solid matrix of water-soluble wax through which the active ingredient is dispersed and which also includes an erosion-inhibiting amount of water-soluble gel blocking synthetic polymer particles.

L66 ANSWER 3 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN



ACCESSION NUMBER: 1993:168274 CAPLUS  
 DOCUMENT NUMBER: 118:168274  
 TITLE: Two post thinning **fertilizer** trials in Pinus radiata in New South Wales, Australia  
 AUTHOR(S): Turner, J.; Lambert, M. J.; Bowman, V.; Knott, J.  
 CORPORATE SOURCE: Forestry Commission of N.S.W., Beecroft, Australia  
 SOURCE: Fertilizer Research (1992), 32(3), 259-67  
 CODEN: FRESDF; ISSN: 0167-1731  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB Two trials in Pinus radiata growing on different sites in New South Wales allowed consideration of **fertilizer** applications after 2nd or 3rd thinning. The trials included factorial applications of N and P at a single thinning intensity plus a further treatment which allowed assessment of different thinning intensities. The most significant growth responses were obtained by application of N and P in combination. The largest response (addnl. productivity compared with the unfertilized control) occurred 4 yr after application and after 7 yr, there was no addnl. absolute response for either of the two sites. The largest **fertilizer** response was 70 m3 ha-1 over 7 yr on one site and 36 m3 ha-1 on the other, indicating differences in absolute responses between sites. It was concluded that in planning treatments, the most responsive sites near the end of the rotation should be selected to maximize economic returns. Foliage analyses indicated differences between sites at the commencement of the study. It was concluded that either a single year of foliage analyses at study commencement is of value, or sampling every year of the study should be used to analyze responses, but a single year of anal. during or at the end of the study would not be of value.

L66 ANSWER 4 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1986:167513 CAPLUS  
 DOCUMENT NUMBER: 104:167513  
 TITLE: Characteristics of soil and productivity of Pinus radiata (D. Don) in New South Wales. I. Relative importance of soil physical and chemical parameters  
 AUTHOR(S): Turvey, N. D.; Rudra, A. B.; Turner, J.  
 CORPORATE SOURCE: For. Sect., Univ. Melbourne, Parkville, 3052, Australia  
 SOURCE: Australian Journal of Soil Research (1986), 24(1), 95-102  
 CODEN: ASORAB; ISSN: 0004-9573  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB A study was carried out in the Lithgow district of New South Wales to determine whether selected **soil** phys. and chemical parameters could be used as predictors of site and the productivity of P. radiata. Sixty plots were located in first-rotation unthinned stands of P. radiata of age 11 yr. None of the stands had received **fertilizer**. The stands were selected to cover a wide range of merchantable volume production (0-175 m3/ha), and were located on a range of geol. types including siltstone, medium-grained quartz sandstone, conglomerate, and rhyolitic tuff and lava. Soil depth was pos. correlated, and percentage sand neg. correlated with all stand production variables. No other **soil** phys. or chemical variables were correlated consistently with stand variables. Discriminant anal. was used to test for the ability of a selected subset of **soil** phys. and chemical variables to discriminate between 3 volume production classes and between 3 geol. groups. Soil depth, percentage sand, and total N contributed to 2 functions which discriminated between volume production groups. Cation-exchange capacity, Bray

P, percentage sand, exchangeable Na, and total N contributed to 2 functions which discriminated between geol. groups. Thus soil phys. parameters were predominant in discriminating between volume production groups, and soil chemical parameters were predominant in discriminating between geol. groups.

L66 ANSWER 5 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1980:469774 CAPLUS  
DOCUMENT NUMBER: 93:69774  
TITLE: Sulfur cycling in a douglas-fir forest and its modification by nitrogen applications  
AUTHOR(S): Turner, J.; Johnson, D. W.; Lambert, Marcia J.  
CORPORATE SOURCE: For. Comm. N.S.W., Beecroft, 2119, Australia  
SOURCE: Acta Oecologica, Oecologia Plantarum (1980), 1(1), 27-35  
CODEN: AOSPDY; ISSN: 0243-7651  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB In a N-deficient Douglas fir ecosystem, a large proportion (14%) of the total S in the aboveground components was sulfate-S, and nearly all the S transferred to the forest floor (81%) was also in this form. The site, in the Pacific Northwest of the USA, is subject to acid rain and elevated S inputs, and because of the biochem. relation between organic S and organic N, excess S was stored and cycled as sulfate-S. N fertilization resulted in the incorporation of foliar sulfate-S into organic S and a reduction in litter fall sulfate-S concns. N stress induced by carbohydrate addns. to the forest floor resulted in greater sulfate-S return via litter fall.

L66 ANSWER 6 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1980:214230 CAPLUS  
DOCUMENT NUMBER: 92:214230  
TITLE: Comparison of sulfur cycling between a conifer and a native forest in the vicinity of a coal-burning power station  
AUTHOR(S): Turner, J.; Lambert, Marcia J.  
CORPORATE SOURCE: For. Comm. New South Wales, Beecroft, 2119, Australia  
SOURCE: Sulphur Emiss. Environ., Int. Symp. (1979), 228-30.  
Soc. Chem. Ind.: London, Engl.  
CODEN: 43GTAQ  
DOCUMENT TYPE: Conference  
LANGUAGE: English

AB The total tree S content of a pine (Pinus radiata) stand located 5 km from a coal-burning power station was 21.2 kg/ha, whereas that of a comparable Eucalyptus stand was 11.4 kg/ha. Foliage had the highest concentration of S and accounted for a greater percentage of the biomass in pine than in Eucalyptus. Soil under pine was derived from Devonian sedimentary parent material and had a low S sorption capacity and low S losses. Losses were higher from the Eucalyptus stand; the soil was derived from as Permian lakebed and had a permeable A horizon with low S sorption capacity and a B horizon with high S sorption capacity and low permeability. There was a greater mass and return of S in litterfall of pine than that of Eucalyptus; <1% of S in Eucalyptus litter was in the sulfate form compared with >40% in pine. Total annual return of S to the forest floor was 33 kg/ha under pine and 26 kg/ha under Eucalyptus.

L66 ANSWER 7 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1979:85903 CAPLUS

DOCUMENT NUMBER: 90:85903  
 TITLE: Requirement and uptake of mineral nutrients in coniferous ecosystems  
 AUTHOR(S): Cole, D. W.; **Turner, J.**; Bledsoe, C.  
 CORPORATE SOURCE: Coll. Forest Resour., Univ. Washington, Seattle, WA, USA  
 SOURCE: Range Science Series (Colorado State University, Range Science Department) (1977), 26(Belowground Ecosyst.: Synth. Plant-Assoc. Processes), 171-6  
 CODEN: CSRSAH; ISSN: 0190-1478  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB Nutrient cycling and uptake, internal redistribution and annual requirements were examined in Douglas fir (*Pseudotsuga menziesii*) (of different ages), red alder (*Alnus rubra*), and Pacific silver fir (*Abies amabilis*). The distribution of organic matter, N, P, K, and Mn were determined in stands of Douglas fir and red alder. The higher soil N in the alder stand reflects the symbiotic N-fixation by this species. In the alder, 37% of the N was found in the current year's tissue and only 13.5% in the Douglas fir illustrating the alder's greater need for annual replacement of its N. Of the N requirement by both species, 54% was met by uptake from the soil. The Mn uptake was much higher by both species. Internal translocation and uptake of the nutrients by Douglas fir (9-95 yr) reached a plateau coincident with the development of the tree canopy at 25-30 yr; however, since Mn accumulates in older tissues, its uptake increased as biomass accumulated. P had the smallest uptake in relation to requirement, since it had the greatest efficiency of translocation. The Pacific silver fir had the lowest N uptake and requirement since it retains its foliage for up to 12 yr.

L66 ANSWER 8 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 1973:545277 CAPLUS  
 DOCUMENT NUMBER: 79:145277  
 TITLE: Initial survey of foliar chloride levels in introduced conifers in New South Wales  
 AUTHOR(S): **Turner, J.**  
 CORPORATE SOURCE: For. Comm. New South Wales, Sydney, Australia  
 SOURCE: Aust. Forest-Tree Nutr. Conf., Contrib. Pap. (1972), Meeting Date 1971, 168-82. Editor(s): Boardman, Robert. Forest, Timber Bur.: Canberra, Aust.  
 CODEN: 27EWAV  
 DOCUMENT TYPE: Conference  
 LANGUAGE: English

AB Mean forest foliar Cl- in the New South Wales forest trees (involving primarily *Pinus radiata*) increased nearer to the sea with increased rainfall and/or number of wet days and with improved soil conditions. Individual tree foliar concns. on a site vary between species and within species. No relation was found between foliar K and Cl-content.

L66 ANSWER 9 OF 12 WPIX COPYRIGHT 2006 THE THOMSON CORP on STN  
 ACCESSION NUMBER: 2003-521204 [49] WPIX  
 DOC. NO. CPI: C2003-139851  
 TITLE: Reducing flammability of cellulosic fiber and substrate, e.g. cotton carpet, by applying composition comprising dimethylol dihydroxyethylene urea, imidazole or imidazolidinone crosslinking agent.  
 DERWENT CLASS: A18 A87 E19 F06  
 INVENTOR(S): REARICK, W A; **TURNER, J.**; WALLACE, M L;

WERNSMAN, D  
 PATENT ASSIGNEE(S): (CTPR) COTTON INC  
 COUNTRY COUNT: 1  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
US 6491727	B1	20021210	(200349)*		10

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 6491727	B1	US 1999-329168	19990609

PRIORITY APPLN. INFO: US 1999-329168 19990609

AB US 6491727 B UPAB: 20030731

NOVELTY - Cellulosic substrates and fibers are prepared by:

(a) preparing composition comprising cross-linking agent(s) consisting of dimethylol dihydroxyethylene urea, imidazoles and/or imidazolidinones;

(b) applying the composition to a cellulosic fiber or its blend with other fiber; and

(c) linking reactive groups on the crosslinking agent(s) with hydroxyl groups on the fiber.

USE - The cellulosic substrates are used as cotton carpets or raised surface apparel (claimed) or upholstery.

ADVANTAGE - The method provides cellulosic substrates having reduced flammability.

Dwg.0/0

L66 ANSWER 10 OF 12 WPIX COPYRIGHT 2006 THE THOMSON CORP on STN

ACCESSION NUMBER: 2001-648187 [74] WPIX

DOC. NO. NON-CPI: N2001-484375

DOC. NO. CPI: C2001-191182

TITLE: Continuously providing radiation-curable coating composition for application to optical fibers used in telecommunications industry, involves incorporating additive to the stock coating composition.

DERWENT CLASS: A89 G02 L01 P42 V07

INVENTOR(S): BISHOP, T E; COONS, L S; LIN, J; SNOWWHITE, P E; TOENNIS, T L; TURNER, J; SNOWWITHE, P E; TURNER, J R

PATENT ASSIGNEE(S): (BISH-I) BISHOP T E; (COON-I) COONS L S; (LINJ-I) LIN J; (SNOW-I) SNOWWHITE P E; (TOEN-I) TOENNIS T L; (TURN-I) TURNER J; (STAM) DSM NV

COUNTRY COUNT: 94

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2001060757	A2	20010823	(200174)*	EN	25
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW					
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW					
US 2001024698	A1	20010927	(200174)		
AU 2001036202	A	20010827	(200176)		

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2001060757	A2	WO 2001-NL127	20010215
US 2001024698	A1 Div ex	US 2000-506131	20000217
		US 2001-861912	20010521
AU 2001036202	A	AU 2001-36202	20010215

## FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2001036202	A Based on	WO 2001060757

PRIORITY APPLN. INFO: US 2000-506131 20000217; US  
2001-861912 20010521

AB WO 200160757 A UPAB: 20011217

NOVELTY - A radiation-curable coating composition is continuously provided by incorporating an additive that is a colorant or an incompatible component, to the stock coating composition.

DETAILED DESCRIPTION - Continuously providing a radiation-curable coating composition for application to an optical fiber comprises continuously introducing a radiation-curable stock coating composition comprising a radiation-curable component(s) into a mixing zone having a primary inlet and an outlet. An additive that is a colorant or an incompatible component is incorporated to the stock coating composition upstream of the mixing zone outlet. The additive and the stock coating composition are mixed on the mixing zone to provide a radiation-curable finished coating composition. The finished coating composition is continuously applied to the optical fiber.

An INDEPENDENT CLAIM is also included for a system for continuously providing a radiation-curable coating composition for application to optical fiber, comprising a liquid conduit for transporting a radiation-curable coating composition to a fiber optic coating applicator; an inlet in the liquid conduit which permits the selective introduction of a stock radiation-curable coating composition; an inlet in the liquid conduit that permits the selective introduction of additives which includes a colorant and an incompatible component; a zone in the liquid conduit that provides for continuous mixing of the additive(s) and the radiation-curable stock coating composition; a fiber optic coating applicator that continuously applies the radiation-curable composition to the optical fiber.

USE - The method is used for continuously providing a radiation-curable coating composition for application to optical fibers. Optical fibers bundled together to provide fiber optic ribbons and cables, are used in the telecommunications industry to transport large volumes of analog and digital data over long distances.

ADVANTAGE - The method does not require an excessive inventory, and permits maximum manufacturing flexibility without an undue sacrifice in product appearance. It provides coating compositions that include beneficial, yet partially or wholly incompatible, components into such compositions as crystal-, hydrolyzate-, and haze-forming components.

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L66 ANSWER 11 OF 12 WPIX COPYRIGHT 2006 THE THOMSON CORP on STN  
ACCESSION NUMBER: 2000-365529 [31] WPIX  
DOC. NO. CPI: C2000-110391  
TITLE: Composition for applying fertilizers,

herbicides and pesticides to land or crops, comprises an anti-drift agent, an inorganic water-soluble compound and a water soluble anionic polymer.

DERWENT CLASS: A14 A97 C03 C07  
 INVENTOR(S): ROSE, A; SNOWDEN, A; ROSE, S A H; SNOWDEN, J A  
 PATENT ASSIGNEE(S): (CIBA) CIBA SPECIALTY CHEM WATER TREATMENTS LTD  
 COUNTRY COUNT: 90  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2000026160	A1	20000511	(200031)*	EN	29
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ TZ UG ZW					
W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZA ZW					
AU 2000010423	A	20000522	(200040)		
EP 1129052	A1	20010905	(200151)	EN	
R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE					
US 6288010	B1	20010911	(200154)		
ZA 2001003368	A	20020130	(200217)		36
MX 2001004210	A1	20010801	(200238)		
AU 761016	B	20030529	(200346)		
EP 1129052	B1	20040630	(200444)	EN	
R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE					
DE 69918457	E	20040805	(200451)		
IL 142495	A	20040725	(200460)		
ES 2222741	T3	20050201	(200510)		
MX 222318	B	20040826	(200538)		
DE 69918457	T2	20050728	(200549)		

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2000026160	A1	WO 1999-EP7995	19991021
AU 2000010423	A	AU 2000-10423	19991021
EP 1129052	A1	EP 1999-953910	19991021
		WO 1999-EP7995	19991021
US 6288010	B1	US 1999-428100	19991027
ZA 2001003368	A	ZA 2001-3368	20010425
MX 2001004210	A1	MX 2001-4210	20010427
AU 761016	B	AU 2000-10423	19991021
EP 1129052	B1	EP 1999-953910	19991021
		WO 1999-EP7995	19991021
DE 69918457	E	DE 1999-618457	19991021
		EP 1999-953910	19991021
		WO 1999-EP7995	19991021
IL 142495	A	IL 1999-142495	19991021
ES 2222741	T3	EP 1999-953910	19991021
MX 222318	B	WO 1999-EP7995	19991021
		MX 2001-4210	20010427
DE 69918457	T2	DE 1999-618457	19991021
		EP 1999-953910	19991021
		WO 1999-EP7995	19991021

## FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2000010423	A Based on	WO 2000026160
EP 1129052	A1 Based on	WO 2000026160
AU 761016	B Previous Publ. Based on	AU 2000010423 WO 2000026160
EP 1129052	B1 Based on	WO 2000026160
DE 69918457	E Based on Based on	EP 1129052 WO 2000026160
IL 142495	A Based on	WO 2000026160
ES 2222741	T3 Based on	EP 1129052
MX 222318	B Based on	WO 2000026160
DE 69918457	T2 Based on Based on	EP 1129052 WO 2000026160

PRIORITY APPLN. INFO: GB 1998-23752 19981030

AB WO 200026160 A UPAB: 20000630

NOVELTY - A composition comprising at least 10%, by weight, of an inorganic water-soluble compound, and upto 1.9%, by weight, of anti-drift agent, which is a water soluble anionic polymer with an intrinsic viscosity of at least 6dl/g, and formed from water soluble monomer or monomer blend, in a water solution, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) a process for preparing the novel composition, where the inorganic compound is a **fertilizer** or herbicide adjuvant, selected from ammonium nitrate, ammonium sulfate, monoammonium phosphate, diammonium phosphate, monopotassium phosphate, dipotassium phosphate, polyphosphate salts, potassium chloride, potassium sulfate, and calcium nitrate;

(2) a process of applying **fertilizer** to land or crops, comprising mixing the composition prepared in (1) with water, and spraying the mixture;

(3) a process of applying a herbicide or pesticide to land or crops, comprising mixing water a herbicide or pesticide, and the novel composition, and then spraying the mixture; and

(4) a method of improving the spray drift properties during **fertilizer**, herbicide or pesticide spraying, by combining the novel composition with water prior to spraying.

USE - The composition and methods are used for applying **fertilizers**, herbicides and pesticides to land or crops (claimed).

ADVANTAGE - The novel composition contains an anti-drift agent, preventing the formation of fine droplets which could be carried beyond the area intended to be treated.

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L66 ANSWER 12 OF 12 WPIX COPYRIGHT 2006 THE THOMSON CORP on STN  
 ACCESSION NUMBER: 2000-339342 [29] WPIX  
 DOC. NO. CPI: C2000-102923  
 TITLE: Preparation of fire resistant cellulosic fibers involves applying a carboxylic acid and catalyst to the fiber composition to esterify the carboxyl groups with the hydroxy groups.  
 DERWENT CLASS: A18 A23 A87 F06  
 INVENTOR(S): AMINUDDIN, N; REARICK, W A; **TURNER, J**; WALLACE, M L  
 PATENT ASSIGNEE(S): (CTPR) COTTON INC  
 COUNTRY COUNT: 89  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2000022222	A1	20000420	(200029)*	EN	41
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL					
OA PT SD SE SL SZ TZ UG ZW					
W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES					
FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS					
LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL					
TJ TM TR TT UA UG UZ VN YU ZA ZW					
AU 9963934	A	20000501	(200036)		

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2000022222	A1	WO 1999-US21614	19991014
AU 9963934	A	AU 1999-63934	19991014

## FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 9963934	A Based on	WO 2000022222

PRIORITY APPLN. INFO: US 1998-172357 19981014

AB WO 200022222 A UPAB: 20000617

NOVELTY - Fire resistant cellulosic fibers are prepared by applying a carboxylic acids and an esterification catalyst to the cellulosic fibers substrates or its blend with another fibers; and esterifying carboxyl groups with hydroxy groups on the fiber.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a carpet/raised surface apparel comprising cotton fiber in which a portion of the hydroxy on the cotton fiber have been esterified with a carboxylic acid-containing moiety.

USE - The process is used for preparing a fire resistant cellulosic fibers.

ADVANTAGE - The advantages of the fire-retardant composition include a relatively low level of toxicity, and the stability of the ester bond to conventional steam cleaning and other carpet cleaning methods.

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